Appendix A: King County Environmental Laboratory Quality Assurance Reviews

KING COUNTY ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REVIEW

for

2008 Stream Sediment Monitoring Program

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INTRODUCTION

This quality assurance (QA) narrative is intended to document the QA review conducted on the chemistry analyses performed for the 2008 Stream Sediment Monitoring program. The QA narrative is organized into the five sections listed below.

- General Comments
- Sample Collection
- Conventional Analyses
- Metal Chemistry
- Organic Chemistry

An overview of the approach used for the QA review is detailed in the *General Comments* section. This review is a comparison of the requirements and specifications in the Sampling and Analysis Plan (SAP) and the actual sample collection and analysis that was performed. Additional information specific to each analysis is included in the appropriate analytical section.

This QA review and narrative (specifically defined as QA1) have been conducted in accordance with guidelines established through the Puget Sound Dredged Disposal Analysis (PSDDA) program, Sediment Management Standards (WAC 173-204-610) and the Sediment Sampling and Analysis Appendix (SAPA), WDOE 2008.

GENERAL COMMENTS

Scope of Samples Submitted

This QA review is associated with freshwater sediment samples collected between July 28 and August 6 2008 as part of the 2008 Stream Sediment Monitoring program. The Stream Sediment Monitoring Sampling and Analysis Plan (SAP), draft version from June 2008, generally defines the criteria used in this review.

All analyses have been conducted by the King County Environmental Laboratory (KCEL). Sediment analytical data are reported with associated data qualifiers and have undergone QA1 review, as summarized in this narrative report.

Completeness

Completeness has been evaluated for this data submission and QA review by considering the following criteria:

- Comparing reported data to the planned project analyses summarized in Table 1.
- Compliance with storage conditions and holding times.
- Frequency of analysis of the complete set of quality control (QC) samples outlined in Table 2.

Methods

Analytical methods are noted in the applicable analytical sections of this QA review.

Target Lists

The reported target lists have been compared to the target analytes listed in *Development of Freshwater Sediment Quality Values for Use in Washington State, Phase II Report* (Ecology, 2003) and may also be compared to *Table 3 - Puget Sound Marine Sediment Cleanup Screening Levels Chemical Criteria* contained in Chapter 173-204 WAC.

Detection Limits

As part of the QA1 review, the detection limits reported for each parameter have been reviewed against the detection limit requirements defined in the SAP. Unfortunately, the 2008 draft SAP was not updated to reflect current organics detection limits available at the time the samples were analyzed. When sample results have been reported as less than the Method Detection Limit (<MDL) and the associated detection limits are higher than those defined in the SAP, the particular samples and parameters have been identified and the circumstances explained. These summaries are included with each analytical section of this QA review.

The KC Laboratory reports include both the reporting detection limit (RDL) and the method detection limit (MDL) for each sample and parameter, where applicable. The RDL is defined as *the minimum concentration of a chemical constituent that can be reliably quantified* while the MDL is defined as *the minimum concentration of a chemical constituent that can be detected*. For some methods the detection limits reported may vary from sample to sample depending on the amount of sample analyzed and any additional dilutions required.

Storage Conditions and Holding Times

Storage conditions and holding times have been evaluated using guidelines defined in the project SAP. Preparation and analysis holding times for each method are summarized in each analytical section.

Method Blanks

Method blank results have been used to evaluate the possible laboratory contamination of samples. Method blank results have been reviewed for the presence of analytes detected at or greater than the MDL. For analytes where the method blank response was at or above the MDL associated sample results may be qualified with a B, B2 or B3 flag, depending on the concentration in the sample compared to the method blank.

Standard Reference Materials and Lab Control Samples

Standard reference material (SRM) and lab control sample (LCS) recoveries have been used to evaluate possible low or high analytical bias on a batch-specific basis. LCS and SRM analysis is included with selected organic, metals and conventional parameters (see Table 2). Sample results may be qualified if the LCS or SRM recoveries indicate a potential bias in the associated batch of samples.

Matrix Spikes

Matrix spike recoveries have been used to evaluate possible low or high analytical bias on a matrix and batch-specific basis. Matrix spikes are analyzed with metals, organics and selected conventionals parameters (see Table 2). All associated sample results may be qualified if the MS recoveries indicate a potential bias with all samples in the batch but it is more typical that only the sample used as the spike will be qualified.

For Metals only, matrix spike recovery results are used to qualify sample data only when the sample levels in the spiked sample are less than 4 times the spiked concentration. High sample levels relative to the spiked concentration can compromise the measurement of accurate spike recoveries.

Laboratory Replicate Samples

Replicate analysis (laboratory duplicates or triplicates) is used as an indicator of method precision and is used to qualify data on an analyte and batch-specific basis. Not all replicate data are used, however, as an indicator for data qualification. Only sets of replicate results which include at least one result greater than the RDL are considered for data qualification. These guidelines have been used to account for the fact that precision obtained near the detection limit is not representative of precision obtained throughout the entire analytical range. The precision of lab replicates is used to qualify data only when it is clear that the excessive variability has influenced the associated sample results. Duplicate matrix spikes are also used for selected methods where analyte levels are not routinely above the RDL. The precision of duplicate matrix spikes is used to qualify data only when it is clear that the variability may have influenced the sample result.

Surrogates

Surrogates are only analyzed for organic parameters. Surrogate recoveries have been used to evaluate possible low or high analytical bias on a sample-specific basis. Individual sample results are flagged only if unacceptable recoveries indicate the sample results are biased.

Data Qualifiers

The data qualification guidelines described above has been summarized in Table 3. This table conforms to the guidelines in the current SAPA (2008).

Units and Significant Figures

Units and the reporting basis vary, depending on the parameter and are explained in the analytical sections below. Data generally have been reported to three significant figures if above the RDL and two significant figures if equal to or below the RDL.

SAMPLE COLLECTION

This section describes sampling activities associated with the collection of 37 freshwater sediment samples between July 28 and August 6, 2008. Sampling activities were conducted following general guidance suggested in the Puget Sound Protocols (PSEP, 1996 and 1998), and in the SAP.

Sampling Locations and Station Positioning

Sampling locations (stations) were selected and the prescribed coordinates determined prior to field activities. Stations were selected in order to characterize and evaluate the potential effect(s) of point and non-point sources on freshwater sediment quality in selected WRIA 8 and WRIA 9 stream basins. A number of these stations are part of King County's long-term ongoing monitoring program; other stations were newly created in 2008. The prescribed coordinates for these stations are presented in the following table. All station coordinates are recorded in state plane coordinate system North American Datum 1983 (NAD83).

Lab ID #	Station Name	Station Description	Prescribed Northing (y-plan)	Prescribed Easting (x-plan)
L46069-1	0478	Little Bear Cr.- mouth at bike trail	278818	1312537
L46069-2	A434	Thornton Creek mouth- last footbridge in park	256883	1285033
L46069-3	00631	Issaquah Creek mouth- last footbridge in park	206430	1336885
L46069-4	0432	McAleer Creek, 16750 Shore Drive Sheridan Beach	277057.2	1284888
L46069-5	0474	North Creek, upstream side of bike trail bridge	278813	1307015
L46069-6	0322	NEWAUKUM Creek//USGS gauging station on N left bank downstream from bridge on 219TH SE	102390.5	1336841
L46069-7	A320	Big Soos Creek, USGS gauge station 12112600, 0.25 mile upstream of hatchery	116821.3	1309972
L46069-8	0317	Springbrook Creek, bridge at north end of Longacres	173079.2	1294315
L46069-9	A315	Hill (Mill) Creek, bridge at 68th and S. 261st	137217.7	1289725
L46094-1	0631	Issaquah Creek, bridge 99C, last footbridge before lake, State Park	203780.7	1340488
L46094-2	B631	Issaquah Creek-Gilman Road Bridge	200030	1341350
L46094-3	C631	Issaquah Creek-Dogwood Rd. Bridge	197025	1342220
L46094-4	A631	Issaquah Creek-Newport Way	194606	1342693
L46094-5	D631	Issaquah Creek-Sycamore Rd. Bridge	190330	1344970
L46094-7	G631	Issaquah Creek-May Valley Rd.	178080	1343640
L46094-8	I631	Issaquah Creek-229th Rd. Bridge	176005	1343260
L46094-9	J631	Issaquah Creek-Cedar Grove Rd. Bridge	171000	1345580
L46094-10	K631	Issaquah Creek-SE 156th Bridge	170760	1347515
L46094-11	L631	Issaquah Creek-252nd Ave. SE Bridge	169105	1350700
L46094-12	K317	Springbrook Creek-SW 27th St. Bridge-Ekman	169340	1295535
L46094-13	L317	Springbrook Creek-43rd/180th St. Bridge-Ekman	164190	1292645
L46094-14	M317	Springbrook Creek-88th Ave. South-Ekman	161415	1294345
L46094-15	N317	Springbrook Creek-S. 192nd/84th Ave. Bridge	160440	1295325
L46094-16	0443	Taylor Creek-Maxwell Road-KC Prop.	154655	1341400
L46094-17	A443	Taylor Creek-236th St. Bridge	151350	1344900
L46094-18	B443	Taylor Creek-SE 208th	153650	1348995
L46094-19	C443	Taylor Creek-SE 216th Street	151070	1350625
L46094-20	0250	DesMoines Creek-mouth in park	150860	1269825
L46094-21	A250	DesMoines Creek-S. 211th St.	153535	1273340

L46094-22	B250	DesMoines Creek-200th St.-in park	157650	1276015
L46094-23	00440	May Creek-mouth in Barbee Mill development	196085	1301950
L46094-24	A440	May Creek-Jones Road green space	192430	1304000
L46094-25	B440	May Creek-95th Way-power/pipelines	192810	1310400
L46094-26	C440	May Creek-Coal Creek Pkway	191845	1312775
L46094-27	D440	May Creek-148th Ave. SE Bridge	190725	1316725
L46094-28	E440	May Creek-164th Ave. SE	185775	1321640
L46094-29	F440	May Creek-Renton-Issaquah Road	184120	1327420

Sediment grab samples were typically collected by wading into the stream. Core samples were collected within the width and reach of each station such that representative depositional material was obtained. This is consistent with the specifications in the SAP.

Sample Description Table

Lab Sample #	Locator	Sample Collection	Sediment Depth (from surface, cm)	Sample Usage
L46069-1	0478	Surface Grabs	5	Chemistry, Microbiology
L46069-2	A434	Surface Grabs	10	Chemistry, Microbiology
L46069-3	00631	Surface Grabs	10	Chemistry, Microbiology
L46069-4	0432	Surface Grabs	5	Chemistry, Microbiology
L46069-5	0474	Surface Grabs	5	Chemistry, Microbiology
L46069-6	0322	Surface Grabs	3	Chemistry, Microbiology
L46069-7	A320	Surface Grabs	6	Chemistry, Microbiology
L46069-8	0317	Surface Grabs	10	Chemistry, Microbiology
L46069-9	A315	Surface Grabs	10	Chemistry, Microbiology
L46094-1	0631	Surface Grabs	5	Chemistry
L46094-2	B631	Surface Grabs	5	Chemistry
L46094-3	C631	Surface Grabs	5	Chemistry
L46094-4	A631	Surface Grabs	5	Chemistry
L46094-5	D631	Surface Grabs	5	Chemistry
L46094-7	G631	Surface Grabs	5	Chemistry
L46094-8	I631	Surface Grabs	5	Chemistry
L46094-9	J631	Surface Grabs	5	Chemistry
L46094-10	K631	Surface Grabs	5	Chemistry
L46094-11	L631	Surface Grabs	5	Chemistry
L46094-12	K317	Surface Grabs	5	Chemistry
L46094-13	L317	Surface Grabs	5	Chemistry
L46094-14	M317	Surface Grabs	5	Chemistry
L46094-15	N317	Surface Grabs	5	Chemistry
L46094-16	0443	Surface Grabs	5	Chemistry
L46094-17	A443	Surface Grabs	5	Chemistry
L46094-18	B443	Surface Grabs	5	Chemistry
L46094-19	C443	Surface Grabs	5	Chemistry
L46094-20	0250	Surface Grabs	3	Chemistry
L46094-21	A250	Surface Grabs	3	Chemistry
L46094-22	B250	Surface Grabs	3	Chemistry
L46094-23	00440	Surface Grabs	5	Chemistry
L46094-24	A440	Surface Grabs	5	Chemistry
L46094-25	B440	Surface Grabs	3	Chemistry
L46094-26	C440	Surface Grabs	3	Chemistry
L46094-27	D440	Surface Grabs	5	Chemistry
L46094-28	E440	Surface Grabs	5	Chemistry
L46094-29	F440	Surface Grabs	5	Chemistry

Sample Collection
Sediment was collected at each station using precleaned PVC core tubes, stainless steel spoons, or an Eckman sampler. Cored samples were collected from shallow water (<3 ft) by pushing the core tubes into the sediment to a depth of 5 to 7 cm. A stainless steel spatula or gloved hand was inserted under the tube mouth to trap the sediment inside as the tube was removed from the stream. Tubes may have been slightly angled to allow drainage of excess water, but fines were not allowed to escape. Sediment in the tube was then transferred to a clean, stainless steel compositing container. Several separate cores may have been collected in order to acquire sufficient sample volume to perform all chemistry analyses. A spoon was used at a number of locations with very thin sediment layers or if the core tubes would not penetrate to at least 3 cm. Sediment was scooped up as efficiently as possible with the spoons and transferred to a stainless steel bucket for compositing. Eckman samplers were used where core tubes could not be easily used and where adequate penetration was possible.

Sample Handling
For cored samples, the entire contents of all core tubes collected at a given site were emptied directly into a stainless steel bucket. If excess water was present, it was decanted once the fines had been allowed to settle. A stainless steel spoon or spatula was then used to homogenize the sample by stirring. Rocks or other debris one half-inch or larger in diameter were removed and discarded.
For spooned samples, the contents of as many spoons of material as needed were emptied directly into a stainless steel bowl. Excess water if present was decanted once the fines had been allowed to settle. The spoon was then used to homogenize the sample by stirring. Any rocks or other debris one half-inch or larger in diameter were removed and discarded.
For samples collected with the Eckman sampler, 5 - 10 cm of sediment was recovered in each grab, allowing collection of a sample aliquot from the top 5 cm. For AVS, an undisturbed portion of sediment from an individual grab using the sampler was placed in a sample jar.
Aliquots of the homogenized sediment were subsampled into individual, pre-labeled containers for chemistry testing except as noted above. Chemical preservative, if needed, was added. Sample containers were supplied by the King County Environmental Laboratory and were pre-cleaned according to analytical specifications.

Decontamination
Dedicated sets of core tubes, spoons and other homogenizing/subsampling equipment were dedicated to each station, precluding the need for decontamination in the field.
The Eckman grab sampler was decontaminated between stations by scrubbing with a brush and ambient water followed by a thorough *in situ* rinsing.

Sample Storage and Preservation
Samples were stored in ice-filled coolers from the time of collection until delivery to the King County Environmental Laboratory. Samples were delivered under chain-of-custody and maintained as such throughout the analytical process. Samples were stored frozen (-18°C) by the laboratory until analysis with the exception of samples for particle size distribution (PSD) analysis, fecal coliform and acid volatile sulfide. Sample aliquots for these analyses were stored refrigerated at approximately 4°C. A more complete description of sample handling and storage can be found in each analytical chemistry section of this narrative.

Copies of chain-of-custody forms and field notes are included as an appendix to this QA review narrative.

CONVENTIONAL ANALYSES

Completeness
Conventional data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Subcontracted Analyses
All analyses were performed at the King County Environmental Laboratory.

Methods
Acid volatile sulfide analyses were performed in accordance with EPA *Methods for Chemical Analysis of Water and Wastes*, 1991.
Ammonia analysis was performed in accordance with Standard Method (SM)4500-NH3-G following a KCl extraction (Plumb, 1981).
pH analyses were performed in accordance with SW846 9045C.
PSD analysis was performed in accordance with ASTM D422.
TOC analysis was performed in accordance with SM5310-B and EPA 9060.
Ortho-phosphate phosphorus analyses were performed in accordance with SM4500-P-F following an Olsen extraction.
Total solids analyses were performed in accordance with SM2540-G.

Detection Limits
The method detection limits (MDLs) reported for conventionals parameters are within the requirements defined in the SAP with the following exceptions.

For ammonia, AVS, ortho-phosphate phosphorus and TOC, reported MDLs and RDLs were higher than SAP requirements for a number of samples. All samples that had higher detection limits had reportable levels of these parameters thus the project goals were not compromised.

For PSD analysis, several samples (L46069-3, -4 and L46094-27) have MDLs above the SAP values but no detectable levels for the associated parameter. It is not expected that this has compromised the project goals since the other 3 PSD parameters for each sample had reportable levels.

Reporting Requirements (significant figures, units, basis and qualifiers)
For analyses performed at the KC Laboratory, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied. This may not apply to subcontracted data.

In the attached Comprehensive Report, conventionals parameters are reported in mg/Kg, dry weight basis, for TOC, ammonia, ortho-phosphate phosphorus and AVS. Particle Size Distribution (PSD) and Total Solids are reported in percent, wet weight basis. For all parameters, the MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. Any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times
Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for conventional analyses are listed in the table below.

Parameter	Lab ID#	Collect Date	Preparation Date	Analysis Date	Holding Time*	Holding Time**
Ammonia	All	28-Jul to 6-Aug-08	28-Aug-08	29-Aug-08	6 Months at -18°C	14 days at -18°C
Particle Size	All	28-Jul to 6-	5-Aug to 3-	6-Aug to 4-	6 Months	NA

Distribution		Aug-08	Sep-08	Sep-08	at 4°C	
Total Organic Carbon (TOC)	All	28-Jul to 6-Aug-08	4-Aug to 18-aug-08	7-Aug to 12-Sep-08	6 Months at -18°C	6 Months at -18°C
Orthophosphate Phosphorous	All	28-Jul to 6-Aug-08	24-Oct to 28-Oct-08	24-Oct to 28-Oct-08	6 Months at -18°C	14 days at -18°C
Total Solids	All	28-Jul to 6-Aug-08	4-Aug to 25-Aug-08	4-Aug to 25-Aug-08	6 Months at -18°C	NA
pH	L46069-1 thru -9	28-Jul-08	29-Jul-08	29-Jul-08	1 day at 4°C	NA
	L46094-1-5, 7-11	29-Jul-08	30-Jul-08	30-Jul-08		
	L46094-16-19, 23, 24	30-Jul-08	31-Jul-08	31-Jul-08		
	L46094-25 thru -29	4-Aug-08	4-Aug-08	4-Aug-08		
	L46094-12 thru -15	5-Aug-08	5-Aug-08	5-Aug-08		
	L46094-20 thru -22	6-Aug-08	6-Aug-08	6-Aug-08		
Acid Volatile Sulfide (AVS)	L46069-1 thru -9	28-Jul-08	31-Jul-08	31-Jul-08	14 days at 4°C	7 days at 4°C
	L46094-1-5, 7-9	29-Jul-08	30-Jul-08	30-Jul-08		
	L46094-10,11,16-19, 23, 24	29,30-Jul-08	31-Jul-08	31-Jul-08		
	L46094-12-15, 20-22, -25	4,5,6-Aug-08	14-Aug-08	14-Aug-08		
	L46094-26 thru -29	4-Aug-08	15-Aug-08	15-Aug-08		

Notes:
* = Holding time from collection to preparation.
** = Holding time from preparation to analysis.

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks

Method blanks were analyzed in connection with ammonia nitrogen, orthophosphate phosphorus, total solids, total organic carbon and acid volatile sulfide analyses. All method blank results were less than the MDL.

Standard Reference Material and/or Laboratory Control Sample (LCS)

An SRM was analyzed in connection with TOC at the frequency noted in Table 2. All SRM percent recoveries were within the acceptance limits listed in the SAP.

LCS samples were analyzed for ammonia, nitrogen at the frequency noted in Table 2. One of these 2 LCS samples analyzed with these samples showed a recovery of 53%, which is below the acceptance limits of 80% – 120%. Since all other matrix spikes and spike blanks were acceptable in this batch, it is assumed the low LCS value does not necessarily indicate a bias for all sample data.

Matrix Spikes

Matrix spikes (MS) were analyzed in conjunction with ammonia nitrogen, orthophosphate phosphorus, TOC and AVS at the frequency noted in Table 2. All matrix spike percent recoveries were within the acceptance limits listed in the SAP, except for the following:

AVS matrix spike recoveries were outside the control limit of 65 – 135% for spiked samples L46094-2 and -21, with measured recoveries of 58% and 40%, respectively. Spike blank recoveries associated with these 2 matrix spikes plus all spike blanks in other preparation batches were all within the control limit of 80 – 120% recovery. Matrix spike recoveries for freshwater sediments are routinely below the lower acceptance limit while spike blank recoveries are acceptable therefore the low MS recoveries are assumed to be due to matrix interference. All sample results for AVS have been qualified with a JG flag to indicate that a low bias likely exists. The extent of the bias is uncertain.

Laboratory Replicate Samples

A set of laboratory triplicates was analyzed for each of the conventional parameters at the frequency noted in Table 2. The percent relative standard deviation (%RSD) for each triplicate

set was less than or equal to the 20% acceptance limit for all parameters, except for Gravel and Silt. The laboratory triplicate for L49094-12 showed %RSD values for Gravel and Silt at 22% and 69%, respectively. The levels of Gravel and Silt in this sample are low enough that higher variability is expected. The data for Gravel and Silt for Sample L49094-12 have therefore been qualified with a J flag to indicate these values should be treated as estimates. No other sample data has been qualified since the results for the other laboratory triplicate indicate that the method was in control.

METALS CHEMISTRY

Completeness
Metals data are reported for all samples listed in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Methods
SEM extracts were prepared by the Conventionals unit of the KCEL using the EPA method for AVS (1991). These extracts were analyzed by EPA methods 245.1 rev 3 (CVAA Mercury) and 200.7 (ICP metals). Total recoverable metals were analyzed in accordance with EPA method 6020 (ICPMS metals) and EPA method 7471B (CVAA Mercury).

Target List
The reported target list includes the following for total recoverable metals: silver, arsenic, cadmium, chromium, copper, nickel, lead, phosphorus, zinc and mercury. The reported target list for SEM metals includes: silver, arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury.

Detection Limits
The method detection limits (MDLs) reported for Metals parameters are within the requirements defined in the draft SAP.

Reporting Requirements (significant figures, units, basis and qualifiers)
For analyses performed at the KCEL, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied.

In the Comprehensive Report attached, Metals parameters are reported in mg/Kg, dry weight basis, for all elements. The MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. For any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times
Sample storage conditions and holding times have been evaluated using guidelines established during the SAP. The dates and holding time criteria for the actual storage conditions used for metals analyses are listed in the tables below.

Total Metals

Parameter	Lab ID#	Date Collected	Date Digested	Date Analyzed	Sample Holding Time	Digestate/Extract Holding Time
Total metals by ICPMS [a]	L46069-1 thru -9	28-Jul-08	20-Oct-08	21-Oct-08	2 years at -18°C	6 months at 20°C
	L46094-1-5, 7-11	29,30-Jul-08				
	L46094-12	5-Aug-08				
	L46094-13-15, 20-22, -25	4,5,6-Aug-08	21-Oct-08	23-Oct-08		
	L46094-26 thru -29	4-Aug-08				
Total Hg by CVAA	L46069-1 thru -9	28-Jul-08	4-Aug-08	4-Aug-08	28 days at -18°C	NA
	L46094-1-5, 7-10	29-Jul-08				
	L46094-11,16-19, 23, 24	29,30-Jul-08	18-Aug-08	19-Aug-08		
	L46094-12-15, 20-22, -25	4,5,6-Aug-08				
	L46094-26 thru -29	4-Aug-08				

[a] Total Metals by ICPMS include Ag, As, Cd, Cr, Cu, Ni, P, Pb, Zn

SEM Extractable Metals

Parameter	Lab ID#	Date Collected	Date AVS/SEM Extracted	Date Analyzed	Sample Holding Time	Digestate/Extract Holding Time
SEM metals by ICP[a]	L46069-1 thru -9	28-Jul-08	31-Jul-08	6-Aug-08	14 days at 4°C	14 days at 20°C
	L46094-1-5, 7-9	29-Jul-08	30-Jul-08			
	L46094-10,11,16-19, 23, 24	29,30-Jul-08	31-Jul-08			
	L46094-12-15, 20-22, -25	4,5,6-Aug-08	14-Aug-08	27-Aug-08		
	L46094-26 thru -29	4-Aug-08	15-Aug-08			
SEM Hg by CVAA	L46069-1 thru -9	28-Jul-08	31-Jul-08	1-Aug-08	14 days at 4°C	14 days at 20°C
	L46094-1-5, 7-10	29-Jul-08	30-Jul-08			
	L46094-10,11,16-19, 23, 24	29,30-Jul-08	31-Jul-08			
	L46094-12-15, 20-22, -25	4,5,6-Aug-08	14-Aug-08	21-Aug-08		
	L46094-26 thru -29	4-Aug-08	15-Aug-08			

[a] SEM by ICP include Ag, As, Cd, Cr, Cu, Ni, Pb, Zn

Method Blanks

All method blanks were less than the MDL, except as noted below.
Two of the 5 AVS/SEM extraction blanks for ICP metals contain detectable levels of zinc and have been qualified with a B flag. The levels of zinc in these blanks are less than 10 times the levels detected in the associated samples so no sample data has been qualified.

Laboratory Control Samples

For total metals, multiple LCS samples were run in order to cover as many reported elements as possible (no LCS is available for phosphorus). Three LCS' were analyzed in association with total recoverable metals included in this data submission. All LCS recoveries were within the defined QC limits for total metals analyses.

No sediment LCS or Standard Reference Material (SRM) is available for the SEM procedure. Spike blanks were run to evaluate the performance of the ICP and CVAA analyses of the extracts. All spike blank recoveries were within acceptance limits.

Matrix Spikes

Matrix spike percent recoveries were within the 75% - 125% QC limits for all total metals and SEM metals analyses, with the following exception.

Spiked Sample ID	Parameter	Matrix Spike Recovery	Sample Flag
L46069-5	Total Arsenic	324%	JL
L46069-5	Total Lead	431%	JL

The unacceptable recoveries are likely due to the relatively high sample background levels of both Arsenic and Lead relative to the spike level. Post digestion spikes for these 2 elements into the matrix spike show acceptable recovery, indicating that the sample matrix was not enhancing the spike recoveries. The parameter results for Total Arsenic and Total Lead for Sample L46069-5 and the matrix spike have been qualified with a JL flag to indicate the reported values should be treated as estimates. Total Arsenic and Lead are qualified with an asterisk on the QC Report.

Matrix Spike Duplicate Samples

Matrix spike duplicate (MSD) samples were analyzed for total mercury only. All matrix spike duplicate (MSD) recoveries were within the 75% - 125% QC limit for total mercury analyses.
The relative percent differences (RPDs) for the MSD results were less than or equal to the QC limit of 20% with one exception. The RPD for the MS/MSD for sample L46069-6 was 25%. It is expected that this high RPD value is an anomaly and doesn't indicate unacceptable method performance therefore no sample data have been qualified based on the RPD results.

Laboratory Replicate Samples

The relative percent differences (RPDs) for laboratory duplicate (LD) results for all total and SEM metals were less than or equal to the QC limit of 20% with one exception. The RPD value for Total Copper for sample L46069-5 was outside the 20% limit at 47%. Because the spike blank and LCS results for Total Copper are acceptable, it is assumed that the exceedance is most likely due to heterogeneity of copper in sample L46069-5. A J flag has been applied to the Total Copper value for the sample and the lab duplicate to indicate the reported values should be treated as estimates. Total Copper is qualified with an asterisk on the QC report. No other sample data has been flagged since it is unknown if the heterogeneity applies to other samples.

ORGANIC CHEMISTRY

Completeness

Organics data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Methods

BNA and EDC analysis was performed in accordance with EPA method 8270C. BNA and EDC samples were extracted according to EPA method 3550B. PCB and chlorinated pesticides analysis was performed in accordance with EPA methods 8082 and 8081A. WTPH-Dx analysis was conducted according to Ecology method NWTPH-DX.

Target List

The reported BNA target list includes all compounds specified in *Table 1 - Marine Sediment Quality Standards Chemical Criteria* and *Table 3 - Puget Sound Marine Sediment Cleanup Screening Levels Chemical Criteria* contained in Chapter 173-204 WAC with the exception of benzo(j)fluoranthene. The KC Laboratory has verified that analytical conditions are sufficient to calculate a total benzofluoranthene result using the reported *b* and *k* isomers.

The reported EDC target lists includes bis(2-ethylhexyl)adipate, bisphenol A and total 4-nonylphenol.

Reported PCB data include Aroclors 1016, 1221, 1232, 1242, 1248, 1254 and 1260.

Detection Limits, Units and Significant Figures

The detection limits (MDLs) for Organics parameters listed in either version of the SAP (original - 2004 or the draft - 2008) do not necessarily reflect the method performance available at the time these samples were analyzed. Wet weight detection limits routinely reported for these analyses are included in the appendices of this narrative. Only 2 parameters (Aniline and Isophorone) showed MDL and RDL values approximately 2 times higher than the detection limits routinely reported for these parameters. For all other organics parameters, the reported MDLs and RDLs met or were lower than the detection limits routinely reported.

The original SAP (2004) defines TOC-normalized MDL requirements for Non-ionizable Organic parameters, based on a nominal dry-weight TOC concentration of 5,000 mg/Kg, or 0.5%. All samples analyzed had dry-weight TOC values above 5,000 mg/Kg and thus could be compared to the listed TOC-normalized MDLs. All MDLs for the Non-ionizable Organic parameters were below the associated SMS criteria. This allows comparison of sample results to SMS levels without the problem of detection limits higher than the SMS levels.

Reporting Requirements (significant figures, units, basis and qualifiers)

For analyses performed at the KC Laboratory, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied.

In the Comprehensive Report attached, Organics parameters are reported on a dry weight basis. For all parameters, the MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. Any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times

Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for organics analyses are listed in the table below.

Parameter	Lab ID#	Date Collected	Date Digested	Date Analyzed	Sample Holding Time	Digestate/Extract Holding Time
BNAs and EDCs	L46069-1 thru -9	28-Jul-08	4-Aug-08	10, 11, 12-Sep-08	1 years at -18°C	40 days at 4°C
	L46094-1-5, 7-11	28,29-Jul-08				
	L46094-16	30-Jul-08				
	L46094-12-15, 20-22, -25 thru -29	4,5,6-Aug-08	8-Aug-08	12,13,18-Sep-08		
	L46094-17-19, 23, 24	30-Jul-08				
Pesticides	L46069-1 thru -9	28-Jul-08	1-Aug-08	14,15-Aug-08	1 years at -18°C	40 days at 4°C
	L46094-1-5, 7-11	28,29-Jul-08				
	L46094-16	30-Jul-08				
	L46094-12-15, 20-22, -25 thru -29	4,5,6-Aug-08	11-Aug-08	12, 13-Sep-08		
	L46094-17-19, 23, 24	30-Jul-08				
PCBs	L46069-1 thru -9	28-Jul-08	1-Aug-08	27, 28-Aug-08	1 years at -18°C	40 days at 4°C
	L46094-1-5, 7-11	28,29-Jul-08				
	L46094-16	30-Jul-08				
	L46094-12-15, 20-22, -25 thru -29	4,5,6-Aug-08	11-Aug-08	18, 19-Sep-08		
	L46094-17-19, 23, 24	30-Jul-08				
WTPH-Dx	L46069-1 thru -9	28-Jul-08	31-Jul-08	6,7-Aug-08	14 days at 4°C	NA
	L46094-1-5, 7-11	28,29-Jul-08				
	L46094-16	30-Jul-08				
	L46094-12-15, 20-22, -25 thru -29	4,5,6-Aug-08	7-Aug-08	13-Aug-08		
	L46094-17-19, 23, 24	30-Jul-08				

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks

Method blanks were analyzed for all Organics parameters and all method blank results were less than the MDL, except as noted below:

1. BNAs

The 2 method blanks analyzed with BNAs each had a result above the MDL for Bis(2-ethylhexyl) phthalate. All samples where the sample to method blank ratio is 5 or less have been qualified with a "B" flag. Samples with ratios above 5 but </= 10 have been qualified with a "B2" flag. Sample results qualified with the B or B2 flag should be treated as estimated values. Samples where the ratio is >10 have no flag added and can be considered unbiased by lab contamination.

2. EDCs

One of the method blanks analyzed with the EDCs had a result above the MDL for Bis(2-ethylhexyl) adipate. All sample results for Bis(2-ethylhexyl) adipate that were associated with this method blank were either <MDL or the sample to method blank ratio was greater than 10. For this reason, no sample results for Bis(2-ethylhexyl) adipate have been qualified and can be considered unbiased by lab contamination.

Surrogate Recoveries

Surrogate recovery acceptance limits for sediment samples have been developed based on historical lab performance using the current analytical methods. The exception to this is Method NWTPH-Dx where method-defined surrogate acceptance limits are applied.

1. BNAs

For BNA sample data, surrogate recoveries are evaluated separately for the acid and base/neutral fractions. Within each fraction, 2 or more surrogates must be outside the acceptance limits in order to qualify the associated sample data. No BNA sample had more than 1 surrogate outside the acceptance limits.

2. PCBs
Sample data are qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

3. Chlorinated Pesticides
Sample data are qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

4. WTPH-Dx
All surrogate recoveries were within the method-specific acceptance limits for 2-fluorobiphenyl for all samples in this data submission. Recovery of pentacosane from selected samples exceeded the upper control limit and these recoveries are identified on the QC report with an "*" flag. However, the associated WTPH-Dx sample results were not qualified since the high recovery is likely due to interference from background pentacosane or a similar coeluting compound. These types of interference do not necessarily indicate a positive bias to the WTPH-Dx results.

5. EDC
Sample data are qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

Standard Reference Materials (SRMs)
The SRM results associated with these samples are summarized below, according to the analysis method (SRMs are only available for BNAs, Chlorinated Pesticides and PCBs). Acceptance limits for the certified parameters reported in this data set have been developed using historical lab data. SRM recoveries outside these lab-defined limits indicate the method has not performed as expected and the associated sample data should be qualified.

1. BNAs
The sediment SRM analyzed in association with the reported BNA results is 1944, certified by the National Institute of Standards and Technology (NIST). The certified organics parameters in SRM 1944 are only a partial list of all the BNA compounds reported in this analysis. All measured recoveries for this SRM were within acceptance limits.

2. Chlorinated Pesticides
The sediment SRM analyzed in association with the reported Chlorinated Pesticides results is 1944, certified by the NIST. SRM 1944 contains certified levels of 4,4'-DDT and alpha-Chlordane. All measured recoveries for this SRM were within acceptance limits.

3. PCBs
The sediment SRM analyzed in association with the reported PCB results is HS2, certified by the National Research Council of Canada. SRM HS2 contains Aroclor 1254. All measured recoveries for this SRM were within acceptance limits.

Matrix Spikes and Spike Blanks
Matrix spikes and Spike Blanks have been analyzed for BNAs, EDCs, PCBs and Chlorinated Pesticides. Recovery acceptance limits for each parameter have been developed based on historical lab performance using the current analytical methods.

1. BNAs
Measured recoveries for the spiked compounds were within their acceptance limits except for the following:
- Di-N-Octyl Phthalate showed a recovery slightly above the acceptance limits for the MSD for sample L46094-12. Since acceptable recovery was observed for the MS and SB associated with this sample it is not expected the high recovery indicates a significant bias. No sample data have been qualified.

- Several compounds were outside the acceptance limits for the spike blanks (SB). It has been observed in past data sets that the SB recoveries can be lower that the associated MS and MSD recoveries. This is likely due to co-extracted material in true samples that help to retain components during concentration steps. Low SB recoveries do not necessarily indicate a method bias unless the MS, MSD and SB all show similar unacceptable results.

2. PCBs and Chlorinated Pesticides
Each of the 17 reported Pesticide compounds was included in the Chlorinated Pesticide matrix spike. Aroclor 1260 and 1016 only are used as the spiking parameters for PCB matrix spike. The measured recovery for each spiked parameter was within acceptance limits except for 2 parameters that showed low recovery in one spike blank and one MSD. Isolated low recoveries for individual parameters do not necessarily indicate a method bias unless the MS, MSD and SB all show similar unacceptable results.

3. EDC
Each of the reported EDC compounds was included in the matrix spike. The measured recovery for each spiked parameter was within acceptance limits.

Laboratory Replicate Samples
A laboratory duplicate sample(s) was analyzed for each Organics parameter. The relative percent differences (RPDs) for laboratory duplicates are compared to the acceptance limits when at least one value is at or above the RDL. All RPD values that met this were less than or equal to the acceptance limit of 35%, except for the following:

BNAs
The RPD for Benzoic Acid for the duplicate analysis of sample L46094-2 was 78%. The result for Benzoic Acid for Sample L46094-2 has therefore been qualified with a "J" flag to indicate the measured value is an estimate. No other sample data has been flagged since it is unknown if the observed imprecision applies to other samples. It is expected that the precision of the method is in control since the RPD value for the MS/MSD for Benzoic Acid was acceptable.

Additional Data Quality Issues

PCBs

The MDL and RDL for sample L46094-14 was raised for Aroclor 1016 due to overlapping PCB congeners from other Aroclors detected in the sample. This result for Aroclor 1016 was qualified "TA" and text information summarizing this anomaly has been appended to sample results.

MICROBIOLOGY

Completeness
Fecal coliform data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Subcontracted Analyses
All analyses were performed at the King County Environmental Laboratory.

Methods
Fecal Coliform was analyzed by Most Probably Number (MPN) analysis using Standard Methods 9221E 20th edition.

Detection Limits
Method detection limits are not routinely reported for samples where organisms have been detected. All samples analyzed for Fecal Coliform showed detectable levels so no detection limit values have been reported.

Reporting Requirements (significant figures, units, basis and qualifiers)
Fecal coliform data are reported according to the guidelines in the reference method, which are typically 2 significant digits with units of MPN per 100 grams of sample. No other qualifiers were applied to the data.

Storage Conditions and Holding Times
Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for conventional analyses are listed in the table below.

Parameter	Lab ID#	Collect Date	Preparation Date	Analysis Date	Preparation Holding Time
Fecal coliform	All	28-Jul-08	29-Jul-08	29,30-Jul-08	24 hours at 4°C

Holding times and storage conditions were met for all samples.

Positive and Negative Controls
The positive and negative controls associated with these samples showed appropriate responses. The method is therefore assumed to be in control.

Laboratory Replicate Samples
A laboratory duplicate (LD) was analyzed using sample L46069-4. The results for the LD are within the 95% confidence limits for the 5-tube MPN method used for this analysis.

TABLE 1 SEDIMENT SAMPLE INVENTORY

Sample	Locator	AVS	PSD	Nutrients[1]	Solids,[2] pH	TOC	Metals[3]	SEM Metals[4]	BNAs[5]	EDCs[6]	Pest/ PCBs	WTPH-Dx	Fecal Coliform
L46069-1	0478		X	X	X	X	X		X	X	X	X	X
L46069-2	A434		X	X	X	X	X		X	X	X	X	X
L46069-3	00631	X	X	X	X	X	X	X	X	X	X	X	X
L46069-4	0432		X	X	X	X	X		X	X	X	X	X
L46069-5	0474		X	X	X	X	X		X	X	X	X	X
L46069-6	0322		X	X	X	X	X		X	X	X	X	X
L46069-7	A320		X	X	X	X	X		X	X	X	X	X
L46069-8	0317	X	X	X	X	X	X	X	X	X	X	X	X
L46069-9	A315		X	X	X	X	X		X	X	X	X	X
L46094-1	0631	X	X	X	X	X	X	X	X	X	X	X	
L46094-2	B631	X	X	X	X	X	X	X	X	X	X	X	
L46094-3	C631	X	X	X	X	X	X	X	X	X	X	X	
L46094-4	A631	X	X	X	X	X	X	X	X	X	X	X	
L46094-5	D631	X	X	X	X	X	X	X	X	X	X	X	
L46094-7	G631	X	X	X	X	X	X	X	X	X	X	X	
L46094-8	I631	X	X	X	X	X	X	X	X	X	X	X	
L46094-9	J631	X	X	X	X	X	X	X	X	X	X	X	
L46094-10	K631	X	X	X	X	X	X	X	X	X	X	X	
L46094-11	L631	X	X	X	X	X	X	X	X	X	X	X	
L46094-12	K317	X	X	X	X	X	X	X	X	X	X	X	
L46094-13	L317	X	X	X	X	X	X	X	X	X	X	X	
L46094-14	M317	X	X	X	X	X	X	X	X	X	X	X	
L46094-15	N317	X	X	X	X	X	X	X	X	X	X	X	
L46094-16	0443	X	X	X	X	X	X	X	X	X	X	X	
L46094-17	A443	X	X	X	X	X	X	X	X	X	X	X	
L46094-18	B443	X	X	X	X	X	X	X	X	X	X	X	
L46094-19	C443	X	X	X	X	X	X	X	X	X	X	X	
L46094-20	0250	X	X	X	X	X	X	X	X	X	X	X	
L46094-21	A250	X	X	X	X	X	X	X	X	X	X	X	
L46094-22	B250	X	X	X	X	X	X	X	X	X	X	X	
L46094-23	00440	X	X	X	X	X	X	X	X	X	X	X	
L46094-24	A440	X	X	X	X	X	X	X	X	X	X	X	
L46094-25	B440	X	X	X	X	X	X	X	X	X	X	X	
L46094-26	C440	X	X	X	X	X	X	X	X	X	X	X	
L46094-27	D440	X	X	X	X	X	X	X	X	X	X	X	

L46094-28	E440	X	X	X	X	X	X	X	X	X	X	X	
L46094-29	F440	X	X	X	X	X	X	X	X	X	X	X	

1 Nutrients = Ammonia nitrogen, *o*-Phosphate, Total phosphorus (analyzed and reported with Metals).
2 Solids = Total Solids.
3 Metals = Hg, Ag, As, Cd, Cr, Cu, Pb, Ni, P and Zn.
4 SEM Metals = Ag, As, Cd, Cr, Cu, Hg, Ni, Pb and Zn.
5 BNAs = low-level, including chlorobenzenes.
6 EDCs = bis(2-ethylhexyl)adipate, bisphenol A, and total 4-nonylphenol.

TABLE 2
QC SAMPLE FREQUENCY FOR SEDIMENT MICROBIAL, CHEMICAL AND PHYSICAL PARAMETERS

Parameter	Method Blank	Duplicate	Triplicate	Matrix Spike	SRM / LCS	Surrogates
Ammonia Nitrogen, *o*-Phosphate	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch, as Available	No
pH	No	See Triplicate	5% minimum, 1 per QC batch	No	No	No
PSD	No	See Triplicate	5% minimum, 1 per QC batch	No	No	No
Total Solids	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	No	No	No
TOC	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	1 per QC batch	No
Total Sulfides, AVS	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	No	No
Metals, SEM Metals	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 LCS per QC batch (total metals only)	No
BNAs / EDCs	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 per QC batch (BNAs only)	Yes
PCBs/Chlorinated Pesticides	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 per QC batch	Yes
WTPH-Dx	1 per QC batch	5% minimum, 1 per QC batch	No	No	No	Yes

Parameter	Lab Duplicate	Positive Control	Negative Control
Fecal Coliform	1 per QC batch	1 per QC batch	1 per QC batch

TABLE 3 - SUMMARY OF DATA QUALIFIERS

Qualifier	Definition
<MDL	Applied when a target analyte is not detected or detected at a concentration less than the associated method detection limit (MDL). The MDL is the lowest concentration at which a sample result will be reported.
<RDL	Applied when a target analyte is detected at a concentration greater than or equal to the associated MDL but less than the associated reporting detection limit (RDL). RDL is defined as the lowest concentration at which an analyte can reliably be quantified.
RDL	Applied when a target analyte is detected at a concentration that, in the raw data is equal to the RDL.
TA	Applied to a sample result when additional narrative information is available in the text field. The additional information may help to qualify the sample result but is not necessarily covered by any other qualifier.
B	**B (including B2 and B3)** are applied when the parameter was detected at a concentration at or above the MDL in the associated blank(s) and has met the appropriate rule or condition, as defined by the method or regulatory program. Use: Application of the "B" flags depends on the ratio of the sample to blank result and the particular parameter according to these rules: - Add a "B" flag to all parameters if the associated blank is ≥ the MDL and the sample result is ≥ MDL but ≤ 5 times the blank. - Add a "B2" flag to common organic lab contaminants (Acetone, 2-Butanone, Methylene Chloride, Bis(2-ethylhexyl) Phthalate, Butyl Benzyl Phthalate and Di-n-butyl Phthalate) if the method blank is ≥ the MDL and the sample result is > 5 and ≤ 10 times the blank. - Add a "B3" flag to all other parameters if the associated blank is ≥ the MDL and the sample result is > 5 and ≤ 10 times the blank.
E	Applied to a sample result that was measured at a concentration greater than the calibration range of the method. It is applied when the detected analyte concentration exceeds the upper instrument calibration limit and further dilution is not feasible. The reported value is an estimated analyte concentration.
J	Applied to a sample result that is considered an estimated value.
JG	Applied to a sample result that is considered an estimated value with a low bias. This will typically be applied when QC results indicate the recovery of the analyte is below the expected limits of the method.
JK	Applied to a sample result that is considered an estimated value with an unknown bias. This will typically be applied when QC results indicate the method precision did not meet the expected limits of the method.
JL	Applied to a sample result that is considered an estimated value with a high bias. This will typically be applied when QC results indicate the recovery of the analyte is above the expected limits of the method.
PASS	PASS is applied for Microbiology QC samples (positive and negative controls) when the results are acceptable (Passing).

ORGANIC CHEMISTRY Detection Limit Values

Method = EPA 3550B / 8270C (GC/MS)
LIMS Product = BNALL
ug/Kg wet weight basis

Analyte	MDL	RDL	Analyte	MDL	RDL
1,2,4-Trichlorobenzene	0.27	0.53	Benzo(g,h,i)perylene	2.7	5.3
1,2-Dichlorobenzene	0.27	0.53	Benzoic Acid	13	26.7
1,2-Diphenylhydrazine	2.7	5.3	Benzyl alcohol	5.3	10.7
1,3-Dichlorobenzene	0.27	0.53	Benzyl Butyl Phthalate	5.3	10.7
1,4-Dichlorobenzene	0.27	0.53	Bis(2-Chloroethoxy)Methane	13	26.7
2,4,5-Trichlorophenol	13	26.7	Bis(2-Chloroethyl)Ether	13	26.7
2,4,6-Trichlorophenol	13	26.7	Bis(2-Chloroisopropyl)Ether	13	26.7
2,4-Dichlorophenol	13	26.7	Bis(2-ethylhexyl)Phthalate	5.3	10.7
2,4-Dimethylphenol	2.7	5.3	Caffeine	5.3	10.7
2,4-Dinitrophenol	27	53.3	Carbazole	2.7	5.3
2,4-Dinitrotoluene	27	53.3	Chrysene	2.7	5.3
2,6-Dinitrotoluene	27	53.3	Coprostanol	53	107
2-Chloronaphthalene	5.3	10.7	Dibenzo(a,h)anthracene	2.7	5.3
2-Chlorophenol	5.3	10.7	Dibenzofuran	2.7	5.3
2-Methylnaphthalene	2.7	5.3	Diethyl Phthalate	5.3	10.7
2-Methylphenol	5.3	10.7	Dimethyl Phthalate	5.3	10.7
2-Nitroaniline	27	53.3	Di-N-Butyl Phthalate	5.3	10.7
2-Nitrophenol	27	53.3	Di-N-Octyl Phthalate	5.3	10.7
3,3'-Dichlorobenzidine	27	53.3	Fluoranthene	2.7	5.33
3-Methylphenol	5.3	10.7	Fluorene	2.7	5.33
3-Nitroaniline	27	53.3	Hexachlorobenzene	0.53	1.07
4,6-Dinitro-O-Cresol	27	53.3	Hexachlorobutadiene	1.3	2.7
4-Bromophenyl Phenyl Ether	13	26.7	Hexachlorocyclobutadiene	27	53.3
4-Chloro-3-Methylphenol	13	26.7	Hexachloroethane	13	26.7
4-Chloroaniline	27	53.3	Indeno(1,2,3-cd)Pyrene	2.7	5.3
4-Chlorophenyl Phenyl Ether	13	26.7	Isophorone	5.3	10.7
4-Methylphenol	5.3	10.7	Naphthalene	2.7	5.3
4-Nitroaniline	27	53.3	Nitrobenzene	5.3	10.7
4-Nitrophenol	27	53.3	N-Nitrosodimethylamine	13	26.7
Acenaphthene	2.7	5.33	N-Nitrosodi-N-Propylamine	5.3	10.7
Acenaphthylene	2.7	5.3	N-Nitrosodiphenylamine	5.3	10.7
Aniline	13	26.7	Pentachlorophenol	13	26.7
Anthracene	2.7	5.3	Phenanthrene	2.7	5.3
Benzo(a)anthracene	2.7	5.3	Phenol	5.3	10.7
Benzo(a)pyrene	2.7	5.3	Pyrene	2.7	5.3

Benzo(b)fluoranthene	2.7	5.3	Pyridine	26	53.3
Benzo(k)fluoranthene	2.7	5.3			

Method = EPA 8081A/8082 (GC/ECD)
LIMS Product = PESTLL
ug/Kg wet weight basis

Analyte	MDL	RDL
4,4'-DDD	0.67	1.33
4,4'-DDE	0.67	1.33
4,4'-DDT	0.67	1.33
Aldrin	0.67	1.33
Alpha-BHC	0.33	0.667
Alpha-Chlordane	0.33	0.667
Beta-BHC	0.33	0.667
Delta-BHC	0.33	0.667
Dieldrin	0.67	1.33
Endosulfan I	0.67	1.33
Endosulfan II	0.67	1.33
Endosulfan Sulfate	0.67	1.33
Endrin	0.67	1.33
Endrin Aldehyde	0.67	1.33
Gamma-BHC (Lindane)	0.33	0.667
Gamma-Chlordane	0.33	0.667
Heptachlor	0.33	0.667
Heptachlor Epoxide	0.33	0.667
Methoxychlor	3.3	6.67
Toxaphene	6.7	13.3

Method = EPA 8081A/8082 (GC/ECD)
LIMS Product = PCBLL
ug/Kg wet weight basis

Analyte	MDL	RDL
Aroclor 1016	0.83	1.67
Aroclor 1221	1.7	3.33
Aroclor 1232	1.7	3.33
Aroclor 1242	0.83	1.67
Aroclor 1248	0.83	1.67
Aroclor 1254	0.83	1.67
Aroclor 1260	0.83	1.67

Method = EPA 3550B / 8270C (GC/MS)

LIMS Product = EDC
ug/Kg wet weight basis

Analyte	MDL	RDL
Bis(2-ethylhexyl)adipate	10	20
Bisphenol A	10	20
Total 4-Nonylphenol	20	40

Method = NWTPH-DX (GC/FID)
LIMS Product = WTPH-Dx
mg/Kg wet weight basis

Analyte	MDL	RDL
Diesel range (C13 - C24)	25	25
Lube oil range (>C24)	25	25

CHAIN OF CUSTODY FORMS

STREAMS SEDS LEGACY 2008

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P46069-7	P46069-8	P46069-9
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX

End of Fieldsheet.

Jean Power 7/28/08 1350
7/28/08 1400
L46069 1-5

STREAMS SEDS LEGACY 2008

Project Number: 421240C Personnel: JD

Sample No. (Type)	P46069-4	P46069-5	P46069-6
Locator	0432	0474	0322
Short Loc. Desc.	McALEER CR	NORTH CR	NEWAK CR
Locator Desc.		NORTH CREEK//UPSTREAM SIDE OF FREEWA	NEWAUKUM CREEK//USGS GAGING STATION
Site	STREAMS	STREAMS	STREAMS
Start Date/Time			7/28/08 1138
End Date/Time			1204
Time Span			
Sample Depth			0.5
Comments	McAleer Creek	North Creek	Newaukum Creek
SAMP INFO			30 spoonfuls
SED DEPTH			0-3cm
SED TYPE			23P20
Dept., Matrix, Prod			
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	5 FRSHWTRSED FC-MPN	5 FRSHWTRSED FC-MPN	5 FRSHWTRSED FC-MPN
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M

CHAIN OF CUSTODY

Relinquished by	Date	Time
[signature]	7/28/08	1330
Received by	**Date**	**Time**
[signature]	7/28/08	1330

Number(s) 46069 6-9

BROWN
SILT
SAND
NO SMELL
ROCKS/twigs

continue ...

Login Number: P46094

ISSAQUAH

STREAMS SEDS BASIN STUDY 2008

Project Number: 421240C

Personnel: SH/JP

Sample No. (Type)	P46094-1	P46094-2	P46094-3
Locator	0631	B631	C631
Short Loc. Desc.	ISSAQ CR	ISSAGILMAN	ISSADOGW
Locator Desc.	ISSAQUAH CREEK//BRIDGE 99C ON SE 56T	ISSAQUAH CREEK	ISSAQUAH CREEK
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	29-JUL-08 / 0915	29-JUL-08 / 940	29-JUL-08 / 1015
End Date/Time	SILT, SAND, BROWN, NO ODOR, NO DEBRIS	SAND, SILT, BROWN, NO ODOR / NO DEBRIS	SAND, SILT, BROWN NO / NO
Time Span			
Sample Depth			
Comments	Issaquah Cr.@routine water site USGS	Issaquah Cr.@Gilman Road	Issaquah Cr.@Dogwood Road
PERSONNEL	SH/JP	SH/JP	SH/JP
SAMP INFO	0631 ROUTINE WATER SITE	GILMAN RD. BRIDGE	DOGWOOD RD. BRIDGE
SED DEPTH	0-5 cm	0-5cm	0-5cm
SED TYPE	23N20	32N20	32N20
Dept., Matrix, Prod	~15 SPOONS	~15 SPOONS	~15 SPOONS
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS

CHAIN OF CUSTODY

RELINQUISHED BY	Date	Time
J. Power	7/29/08	1452
RECEIVED BY	Date	Time
[illegible]	7/29/08	1454

L 46094 1-5, 7-11

WG 98759 9/22
R 129394

continue ...

SPRINGBROOK

STREAMS SEDS BASIN STUDY 2008

Project Number: 421240C Personnel:

Sample No. (Type)	P46094-10	P46094-11	P46094-12
Locator	K631	L631	K317
Short Loc. Desc.	ISSA156TH	ISSA252ND	SPRING27TH
Locator Desc.	ISSAQUAH CREEK	ISSAQUAH CREEK	SPRINGBROOK CREEK NASTY
Site	STREAMS	STREAMS	STREAMS
Start Date/Time			5-AUG-08/1015
End Date/Time			SILT, SAND, GREEN/BROWN H2S + SOLVENT, W/P DEB
Time Span			
Sample Depth			
Comments	Issaquah Cr.@SE 156th St.	Issaquah Cr.@252nd Ave. SE	Springbrook Cr.@SW 27th St.
PERSONNEL			JP
SAMP INFO			OFF CONCRETE BULKHEAD NORTH SIDE OF 27TH ST. B
SED DEPTH			0-5 cm
SED TYPE			23P237
Dept., Matrix, Prod			4 ECKMAN GRABS
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS
			+ EXTRA CONTAINER PSD

J. Power 8/5/08 1430

8/5/08 14:34

L 46094 12-15

* COLLECT DATE IS INCORRECT IN LIMS

LEECHES IN SAMPLE SILT W/ UPPER LAYER OF LEAVES + STICKS REMOVED DEBRIS BEFORE SPLITTING

continue ...

TAYLOR

STREAMS SEDS BASIN STUDY 2008

30-JUL-08

Project Number: 421240C Personnel: JP

Sample No. (Type)	P46094-16	P46094-17	P46094-18
Locator	0443	A443	B443
Short Loc. Desc.	TAYLORMAX	TAYLOR236TH	TAYLOR208TH
Locator Desc.	TAYLOR CREEK	TAYLOR CREEK	TAYLOR CREEK
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	30-JUL-08/1000	30-JUL-08/1035	30-JUL-08/1100
End Date/Time	@ MOUTH of TAYLOR REACH CREEK NATURAL AREA	POOL D.S. OF ROAD - SILT OVER ROCKS	D.S. SIDE OF CULVERT
Time Span	SILT, SAND, BROWN H2S MOD, PLANTS	SAND, SILT, NAT. ODOR BROWN, W/P DEBRIS	SAND, GRAVEL, BROWN NO ODOR W/P DEBRIS
Sample Depth			
Comments	Taylor Cr.@Maxwell Rd.	Taylor Cr.@236th DOWNSTREAM SIDE	Taylor Cr.@SE 208th
PERSONNEL	JP	JP	JP
SAMP INFO			
SED DEPTH	0-5 cm	0-5 cm	0-5 cm
SED TYPE	23P27	32P21	34P20
Dept., Matrix, Prod	SPOON	SPOON	SPOON
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS

CHAIN OF CUSTODY

	Date	Time
J. Power	7/30/08	1500
[illegible]	7/30/08	15:04

L46094 16-19, 23+24

USED ALL AVAILABLE FINE MATERIAL FISH + LAMPREYS @ SITE STINK EYE FROM

continue ...

DES MOINES

STREAMS SEDS BASIN STUDY 2008

Project Number: 421240C Personnel: JP

Sample No. (Type)	P46094-19	P46094-20	P46094-21
Locator	C443	0250	A250
Short Loc. Desc.	TAYLOR216TH	DESMMOUTH	DESM211TH
Locator Desc.	TAYLOR CREEK	DESMOINES CREEK	DESMOINES CREEK
Site	STREAMS	STREAMS	STREAMS
Start Date/Time		6-AUG-08 / ~~1150~~ 1140	6-AUG-08 / 1110
End Date/Time		SAND, GRAVEL, BROWN MARINE ODOR, W/P DEBRIS	SAND, GRAVEL, BROWN NO ODOR, W/P DEBRIS
Time Span			
Sample Depth			
Comments	Taylor Cr.@SE 216th	DesMoines Cr.mouth	DesMoines Cr.@S. 211th
PERSONNEL		JP	JP
SAMP INFO			
SED DEPTH		0-3 cm	0-3 cm
SED TYPE		34P21	34P20
Dept., Matrix, Prod		~15 SPOONS	~20 SPOONS
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS

CHAIN OF CUSTODY

Relinquished by	Date	Time
J. Power	8/6/08	1310
Received by	Date	Time
[illegible]	8/6/08	13:37

Number(s)
L46094 20-22

~20 FT. D.S. OF EDUCATION CENTER
EVIDENCE OF SALT WATER BACK UP

DIFFICULT ACCESS
FEW FINES

continue ...

STREAMS SEDS BASIN STUDY 2008

Project Number: 421240C Personnel: _____

Sample No. (Type)	P46094-25	P46094-26	P46094-27
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX

continue ...

J. Power 8/4/05 1448
8/4/08 14:52
L 46094 25-29

King County Environmental Lab Analytical QC Report

MB:WG97840-1 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG97840-2 MB:WG97840-1 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	<MDL	26.4	28.4	107		80--120

LT:WG97840-4 LD:WG97840-3 L46094-2 Matrix: FRSHWTRSED Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Sulfide, Acid Volatile	0.25	1	mg/Kg	0.29	0.37	0.3			20

MS:WG97840-5 L46094-2 Matrix: FRSHWTRSED Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	0.29	26.2	15.5	58	*	65--135

MB:WG97840-6 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG97840-7 MB:WG97840-6 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	<MDL	25.7	24.6	96		80--120

King County Environmental Lab Analytical QC Report

Workgroup: WG98063 (AVS for Streams Sediments) Run ID: R128442

MB:WG98063-1 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG98063-2 MB:WG98063-1 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	<MDL	25.9	24.5	95		80--120

LT:WG98063-4 LD:WG98063-3 L46094-21 Matrix: FRSHWTRSED Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Sulfide, Acid Volatile	0.25	1	mg/Kg	0.92	0.92	1.06	8		20

MS:WG98063-5 L46094-21 Matrix: FRSHWTRSED Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	1.3	5	mg/Kg	0.92	25.7	11.1	40	*	65--135

MB:WG98063-6 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG98063-7 MB:WG98063-6 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991(334V0) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	<MDL	26.3	21.8	83		80--120

King County Environmental Lab Analytical QC Report

Workgroup: WG98313 (NH3-KCL Stream Seds 421) Run ID: R130938

MB:WG98313-1 Matrix: OTHR SOLID Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Ammonia Nitrogen	0.1	0.2	mg/Kg	<MDL	

SB:WG98313-2 MB:WG98313-1 Matrix: OTHR SOLID Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	1	2	mg/Kg	<MDL	10	9.73	97		80--120

LCS:WG98313-3 Matrix: OTHR SOLID Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.1	0.2	mg/Kg	1	0.874	87		80--120

LT:WG98313-5 LD:WG98313-4 L46069-7 Matrix: FRSHWTRSED Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Ammonia Nitrogen	0.95	1.89	mg/Kg	2.49	2.65	2.49	4		20

MS:WG98313-6 L46069-7 Matrix: FRSHWTRSED Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.96	1.93	mg/Kg	2.49	9.6311	10.2	80		75--125

MB:WG98313-7 Matrix: OTHR SOLID Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Ammonia Nitrogen	0.1	0.2	mg/Kg	<MDL	

SB:WG98313-8 MB:WG98313-7 Matrix: OTHR SOLID Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	1	2	mg/Kg	<MDL	10	9.03	90		80--120

LCS:WG98313-9 Matrix: OTHR SOLID Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.1	0.2	mg/Kg	1	0.534	53	*	80--120

King County Environmental Lab Analytical QC Report

LT:WG98313-11 LD:WG98313-10 L46094-17 Matrix: FRSHWTRSED Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Ammonia Nitrogen	0.86	1.73	mg/Kg	5.42	5.43	5.21	2		20

MS:WG98313-12 L46094-17 Matrix: FRSHWTRSED Listtype: CVNH3-KCL Method: SM4500-NH3-G(332V1)KCL Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.98	1.96	mg/Kg	5.42	9.7801	14.1	89		75--125

King County Environmental Lab Analytical QC Report

Workgroup: WG98002 (orthoP-OL Streams Seds) Run ID: R130612

MB:WG98002-1 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	

SB:WG98002-2 MB:WG98002-1 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	8	8.07	101		80--120

LCS:WG98002-3 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	16	16.4	103		80--120

LT:WG98002-5 LD:WG98002-4 L46069-3 Matrix: FRSHWTRSED Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Orthophosphate Phosphorus	0.97	2.43	mg/Kg	12.8	12.3	12.8	2		20

MS:WG98002-6 L46069-3 Matrix: FRSHWTRSED Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	0.96	2.4	mg/Kg	12.8	7.67	19	81		70--130

MB:WG98002-7 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	

SB:WG98002-8 MB:WG98002-7 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	8	7.96	100		80--120

LCS:WG98002-9 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	16	15.9	99		80--120

King County Environmental Lab Analytical QC Report

LT:WG98002-11 LD:WG98002-10 L46094-17 Matrix: FRSHWTRSED Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Orthophosphate Phosphorus	0.99	2.46	mg/Kg	10.3	10.5	10.7	2		20

MS:WG98002-12 L46094-17 Matrix: FRSHWTRSED Listtype: CVORTHOP-OL Method: SM4500-P-F(332V1)OL Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	0.95	2.39	mg/Kg	10.3	7.63	17.8	98		70--130

King County Environmental Lab Analytical QC Report

Workgroup: WG97748 (ph for 421240) Run ID: R128511

CS:WG97748-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B (303V5) Project: NONE

(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.91	101		98--102

LT:WG97748-3 LD:WG97748-2 L46069-1 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C (303V5) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	7.3	7.34	7.35	0		5

King County Environmental Lab Analytical QC Report

Workgroup: WG97826 (ph for 421240) Run ID: R128654

CS:WG97826-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B (303V5) Project: NONE

(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.9	101		98--102

LT:WG97826-3 LD:WG97826-2 L46094-1 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C (303V5) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	7.35	7.26	7.32	1		5

King County Environmental Lab Analytical QC Report

Workgroup: WG97827 (ph for 421240) Run ID: R128818

CS:WG97827-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B (303V5) Project: NONE

(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.9	101		98--102

LT:WG97827-3 LD:WG97827-2 L46094-16 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C (303V5) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	7.06	7.03	7.02	0		5

King County Environmental Lab Analytical QC Report

Workgroup: WG97876 (pH/421240 Streams Sed) Run ID: R128844

CS:WG97876-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B (303V5) Project: NONE

(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.89	100		98--102

LT:WG97876-3 LD:WG97876-2 L46094-25 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C (303V5) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	7.49	7.47	7.48	0		5

King County Environmental Lab Analytical QC Report

Workgroup: WG97887 (pH/421240 Streams Sed) Run ID: R128845

CS:WG97887-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B (303V5) Project: NONE

(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.89	100		98--102

LT:WG97887-3 LD:WG97887-2 L46094-12 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C (303V5) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	6.99	7.01	7.02	0		5

King County Environmental Lab Analytical QC Report

Workgroup: WG97911 (pH/421240 Streams Sed) Run ID: R128846

CS:WG97911-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B (303V5) Project: NONE

(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.89	100		98--102

LT:WG97911-3 LD:WG97911-2 L46094-20 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C (303V5) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	7.85	7.75	7.76	1		5

King County Environmental Lab Analytical QC Report

Workgroup: WG97872 (psd) Run ID: R129127

LT:WG97872-2 LD:WG97872-1 L46069-2 Matrix: FRSHWTRSED Listtype: CVPSD Method: ASTM D422(318V1) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Clay	2.1	4.28	%	6.4	8.4	8.6	15		20
Gravel	0.43	4.28	%	7.3	7.8	9	11		20
Sand	0.43	4.28	%	52.6	51	53.2	2		20
Silt	2.1	4.28	%	27.8	25.2	25.7	5		20

King County Environmental Lab Analytical QC Report

Workgroup: WG98155 (PSD) Run ID: R129128

LT:WG98155-2 LD:WG98155-1 L46094-12 Matrix: FRSHWTRSED Listtype: CVPSD Method: ASTM D422(318V1) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Clay	1.6	3.28	%	14.9	16.5	14.8	6		20
Gravel	0.33	3.28	%	4.5	2.9	3.7	22	E	20
Sand	0.33	3.28	%	72.7	71	74.9	3		20
Silt	1.6	3.28	%	3.3	9.9	3.3	69	E	20

King County Environmental Lab Analytical QC Report

Workgroup: WG97771 (TOC) Run ID: R128289

MB:WG97771-1 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG97771-2 MB:WG97771-1 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2700	108		80--120

SRM:WG97771-3 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE

(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	2400	4790	mg/Kg	33480	35300	105		80--120

LT:WG97771-5 LD:WG97771-4 L46069-7 Matrix: FRSHWTRSED Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Organic Carbon	1600	3210	mg/Kg	10800	10800	9900	5		20

MS:WG97771-6 L46069-7 Matrix: FRSHWTRSED Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	1600	3240	mg/Kg	10800	8102	18500	95		75--125

King County Environmental Lab Analytical QC Report

Workgroup: WG97980 (TOC) Run ID: R128473

MB:WG97980-1 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG97980-2 MB:WG97980-1 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2490	100		80--120

SRM:WG97980-3 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	2500	5010	mg/Kg	33480	30200	90		80--120

LT:WG97980-5 LD:WG97980-4 L46094-5 Matrix: FRSHWTRSED Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Organic Carbon	1600	3110	mg/Kg	6430	6360	6040	3		20

MS:WG97980-6 L46094-5 Matrix: FRSHWTRSED Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	1700	3340	mg/Kg	6430	8347	14800	100		75--125

King County Environmental Lab Analytical QC Report

Workgroup: WG97982 (TOC) Run ID: R129191

MB:WG97982-1 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG97982-2 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	2400	4860	mg/Kg	33480	32700	98		80--120

MB:WG97982-3 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG97982-4 MB:WG97982-3 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2690	108		80--120

SRM:WG97982-5 Matrix: OTHR SOLID Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	2500	4970	mg/Kg	33480	32600	97		80--120

LT:WG97982-7 LD:WG97982-6 L46094-21 Matrix: FRSHWTRSED Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Organic Carbon	1700	3430	mg/Kg	12500	9970	11000	11		20

MS:WG97982-8 L46094-21 Matrix: FRSHWTRSED Listtype: CVTOC Method: EPA 9060-PSEP96(337V3) Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	1800	3600	mg/Kg	12500	9077	21600	100		75--125

King County Environmental Lab Analytical QC Report

Workgroup: WG97773 (TOTS) Run ID: R128161

MB:WG97773-1 Matrix: OTHR SOLID Listtype: CVTOTS Method: SM2540-G (307V3) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG97773-3 LD:WG97773-2 L46069-1 Matrix: FRSHWTRSED Listtype: CVTOTS Method: SM2540-G (307V3) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Solids	0.005	0.01	%	53.6	51.6	65.2	13		20

King County Environmental Lab Analytical QC Report

Workgroup: WG97981 (TOTS) Run ID: R128474

MB:WG97981-1 Matrix: OTHR SOLID Listtype: CVTOTS Method: SM2540-G (307V3) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG97981-3 LD:WG97981-2 L46094-2 Matrix: FRSHWTRSED Listtype: CVTOTS Method: SM2540-G (307V3) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Solids	0.005	0.01	%	54.2	57.6	57.6	3		20

King County Environmental Lab Analytical QC Report

Workgroup: WG97984 (TOTS) Run ID: R128560

MB:WG97984-1 Matrix: OTHR SOLID Listtype: CVTOTS Method: SM2540-G (307V3) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG97984-3 LD:WG97984-2 L46094-17 Matrix: FRSHWTRSED Listtype: CVTOTS Method: SM2540-G (307V3) Project: 421240C

(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Solids	0.005	0.01	%	20.9	18.1	23.8	14		20

MB:WG97984-4 Matrix: OTHR SOLID Listtype: CVTOTS Method: SM2540-G (307V3) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

King County Environmental Lab Analytical QC Report

Workgroup: WG97683 (STREAMS (sediment)) Run ID: R128085

LD:WG97683-1 L46069-4 Matrix: FRSHWTRSED Listtype: MCFC-MPN Method: SM 9221E 20TH Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	Rlog	P value	Qual
Fecal Coliform			MPN/100g	24000	50000			

PC:WG97683-2 Matrix: FRSHWTRSED Listtype: MCFC-MPN Method: SM 9221E 20TH Project:

(Positive Control)

Parameter	MDL	RDL	Units	PC Value	Qual
Fecal Coliform			MPN/100g		PASS

NC:WG97683-3 Matrix: FRSHWTRSED Listtype: MCFC-MPN Method: SM 9221E 20TH Project:

(Negative Control)

Parameter	MDL	RDL	Units	NC Value	Qual
Fecal Coliform			MPN/100g		PASS

King County Environmental Lab Analytical QC Report

Workgroup: WG97837 (STREAMS SEDIMENT) Run ID: R128242

LCS:WG97837-1 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.025	0.251	mg/Kg	1.09	1.09	100		80--120

MB:WG97837-2 Matrix: SOLIDBLANK Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.0024	0.0244	mg/Kg	<MDL	

SB:WG97837-3 MB:WG97837-2 Matrix: SOLIDBLANK Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.0024	0.0244	mg/Kg	<MDL	0.0488	0.0483	99		85--115

MSD:WG97837-5 MS:WG97837-4 L46069-6 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Mercury, Total, CVAA	0.0025	0.0245	mg/Kg	0.015	0.0498	0.0745	119		75--125	0.0491	0.0607	93		25		20

LD:WG97837-6 L46069-6 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Mercury, Total, CVAA	0.0025	0.025	mg/Kg	0.015	0.015			20

King County Environmental Lab Analytical QC Report

Workgroup: WG98123 (stream seds) Run ID: R128542

LCS:WG98123-1 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.026	0.256	mg/Kg	1.09	1.11	102		80--120

MB:WG98123-2 Matrix: SOLIDBLANK Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.0024	0.0244	mg/Kg	<MDL	

SB:WG98123-3 MB:WG98123-2 Matrix: SOLIDBLANK Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.0024	0.0244	mg/Kg	<MDL	0.0488	0.0496	102		85--115

MSD:WG98123-5 MS:WG98123-4 L46094-20 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Mercury, Total, CVAA	0.0025	0.0245	mg/Kg	0.015	0.0501	0.065	100		75--125	0.049	0.0664	105		5		20

LD:WG98123-6 L46094-20 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: CVAA EPA 7471B (604V4) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Mercury, Total, CVAA	0.0025	0.025	mg/Kg	0.015	0.016			20

King County Environmental Lab Analytical QC Report

Workgroup: WG97828 (STREAMS SEDIMENT - SEM) Run ID: R128239

MB:WG97828-1 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

SB:WG97828-2 MB:WG97828-1 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	0.02	0.0179	89		85--115

MS:WG97828-3 L46094-2 Matrix: FRSHWTRSED Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.00299	mg/Kg	<MDL	0.0199	0.0189	95		75--125

LD:WG97828-4 L46094-2 Matrix: FRSHWTRSED Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.00301	mg/Kg	<MDL	<MDL			20

MB:WG97828-5 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

MB:WG97828-6 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

King County Environmental Lab Analytical QC Report

Workgroup: WG98193 (Stream Seds SEM) Run ID: R128661

MB:WG98193-1 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

SB:WG98193-2 MB:WG98193-1 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	0.02	0.0212	106		85--115

MS:WG98193-3 L46094-21 Matrix: FRSHWTRSED Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	0.02	0.0229	115		75--125

LD:WG98193-4 L46094-21 Matrix: FRSHWTRSED Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	<MDL			20

MB:WG98193-5 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

MB:WG98193-6 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: CVAA EPA 245.1 (604V4) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

King County Environmental Lab Analytical QC Report

Workgroup: WG97893 (SEM 06-AUG-08) Run ID: R128248

SB:WG97893-1 MB:WG97893-2 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	20	19.5	98		85--115
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	20	19	95		85--115
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	20	18.5	93		85--115
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	18.7	94		85--115
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	20	18.4	92		85--115
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.2	91		85--115
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	18.8	94		85--115
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.8	94		85--115

MB:WG97893-2 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

LD:WG97893-3 L46094-2 Matrix: FRSHWTRSED Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.51	mg/Kg	0.55	0.61			20
Cadmium, Extractable, SEM	0.04	0.201	mg/Kg	<MDL	<MDL			20
Chromium, Extractable, SEM	0.06	0.301	mg/Kg	0.74	0.743	0		20
Copper, Extractable, SEM	0.08	0.402	mg/Kg	2.18	2.56	16		20
Lead, Extractable, SEM	0.4	2.01	mg/Kg	1.5	1.5			20
Nickel, Extractable, SEM	0.1	0.502	mg/Kg	1.01	1.01	1		20
Silver, Extractable, SEM	0.08	0.402	mg/Kg	<MDL	<MDL			20
Zinc, Extractable, SEM	0.1	0.502	mg/Kg	7.22	6.91	4		20

MS:WG97893-4 L46094-2 Matrix: FRSHWTRSED Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.49	mg/Kg	0.55	19.9	20.3	99		75--125
Cadmium, Extractable, SEM	0.04	0.199	mg/Kg	<MDL	19.9	19.2	97		75--125
Chromium, Extractable, SEM	0.06	0.299	mg/Kg	0.74	19.9	19	91		75--125
Copper, Extractable, SEM	0.08	0.398	mg/Kg	2.18	19.9	20.4	92		75--125

King County Environmental Lab Analytical QC Report

Lead, Extractable, SEM	0.4	1.99	mg/Kg	1.5	19.9	20.2	94		75--125							
Nickel, Extractable, SEM	0.1	0.498	mg/Kg	1.01	19.9	19.6	93		75--125							
Silver, Extractable, SEM	0.08	0.398	mg/Kg	<MDL	19.9	18.6	93		75--125							
Zinc, Extractable, SEM	0.1	0.498	mg/Kg	7.22	19.9	25.9	94		75--125							
MB:WG97893-5 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project:																
(Method Blank)																
Parameter	**MDL**	**RDL**	**Units**	**MB Value**	**Qual**											
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL												
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL												
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL												
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL												
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL												
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	0.19												
MB:WG97893-6 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project:																
(Method Blank)																
Parameter	**MDL**	**RDL**	**Units**	**MB Value**	**Qual**											
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL												
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL												
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL												
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL												
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL												
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL												

King County Environmental Lab Analytical QC Report

Workgroup: WG98292 (SEM 27-AUG-08) Run ID: R128817

SB:WG98292-1 MB:WG98292-2 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	20	19.5	98		85--115
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	20	18.9	95		85--115
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	20	18.8	94		85--115
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	18.5	92		85--115
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	20	18.6	93		85--115
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.5	93		85--115
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	18.4	92		85--115
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.8	94		85--115

MB:WG98292-2 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project:

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	B

LD:WG98292-3 L46094-21 Matrix: FRSHWTRSED Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	1.1	1.2			20
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	0.15	0.14			20
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	0.919	0.915	0		20
Copper, Extractable, SEM	0.08	0.4	mg/Kg	7.19	6.82	5		20
Lead, Extractable, SEM	0.4	2	mg/Kg	6.35	6.02	5		20
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	2.47	2.39	3		20
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	<MDL			20
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	38.5	36.8	5		20

MS:WG98292-4 L46094-21 Matrix: FRSHWTRSED Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	1.1	20	20.6	97		75--125
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	0.15	20	19.2	95		75--125
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	0.919	20	19.3	92		75--125
Copper, Extractable, SEM	0.08	0.4	mg/Kg	7.19	20	25.6	92		75--125

King County Environmental Lab Analytical QC Report

Lead, Extractable, SEM	0.4	2	mg/Kg	6.35	20	24.2	89		75--125							
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	2.47	20	20.4	90		75--125							
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	18.6	93		75--125							
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	38.5	20	55.2	83		75--125							
MB:WG98292-5 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project:																
(Method Blank)																
Parameter	**MDL**	**RDL**	**Units**	**MB Value**	**Qual**											
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL												
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL												
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL												
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL												
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL												
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	0.14	B											
MB:WG98292-6 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: ICP EPA 200.7 (612V3) Project:																
(Method Blank)																
Parameter	**MDL**	**RDL**	**Units**	**MB Value**	**Qual**											
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL												
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL												
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL												
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL												
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL												
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL												
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL												

King County Environmental Lab Analytical QC Report

Workgroup: WG99206 (10/20/08 Streams Sediment) Run ID: R132704

MB:WG99206-1 Matrix: SOLIDBLANK Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	
Cadmium, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	
Chromium, Total, ICP-MS	0.016	0.082	mg/Kg	<MDL	
Copper, Total, ICP-MS	0.033	0.164	mg/Kg	<MDL	
Lead, Total, ICP-MS	0.0061	0.0082	mg/Kg	<MDL	
Nickel, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	
Phosphorus, Total, ICP-MS	8.2	41	mg/Kg	<MDL	
Silver, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	
Zinc, Total, ICP-MS	0.041	0.205	mg/Kg	<MDL	

LCS:WG99206-2 Matrix: SOIL Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.1	0.508	mg/Kg	129	147	114		79--121
Cadmium, Total, ICP-MS	0.051	0.254	mg/Kg	68.3	80.6	118		80--120
Chromium, Total, ICP-MS	0.2	1.02	mg/Kg	70.4	75.8	108		73--127
Copper, Total, ICP-MS	0.41	2.03	mg/Kg	65.4	75.4	115		80--120
Lead, Total, ICP-MS	0.076	0.102	mg/Kg	131	145	111		80--120
Nickel, Total, ICP-MS	0.1	0.508	mg/Kg	55.4	61.2	111		80--120
Silver, Total, ICP-MS	0.051	0.254	mg/Kg	112	116	103		47--154
Zinc, Total, ICP-MS	0.51	2.54	mg/Kg	176	200	114		78--121

SB:WG99206-3 MB:WG99206-1 Matrix: SOLIDBLANK Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	1.64	1.81	110		85--115
Cadmium, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	1.64	1.76	107		85--115
Chromium, Total, ICP-MS	0.016	0.082	mg/Kg	<MDL	1.64	1.73	105		85--115
Copper, Total, ICP-MS	0.033	0.164	mg/Kg	<MDL	1.64	1.84	112		85--115
Lead, Total, ICP-MS	0.0061	0.0082	mg/Kg	<MDL	1.64	1.69	103		85--115
Nickel, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	1.64	1.79	109		85--115
Phosphorus, Total, ICP-MS	8.2	41	mg/Kg	<MDL	410	413	101		85--115
Silver, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	1.64	1.75	107		85--115
Zinc, Total, ICP-MS	0.041	0.205	mg/Kg	<MDL	1.64	1.83	111		85--115

LD:WG99206-4 L46069-5 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.0084	0.0422	mg/Kg	3.4	2.95	14		20
Cadmium, Total, ICP-MS	0.0042	0.0211	mg/Kg	0.0549	0.0556	1		20

King County Environmental Lab Analytical QC Report

Chromium, Total, ICP-MS	0.017	0.0845	mg/Kg	16.2	18.1	11		20	
Copper, Total, ICP-MS	0.034	0.169	mg/Kg	12.5	7.76	47	*	20	
Lead, Total, ICP-MS	0.0063	0.00845	mg/Kg	2.86	2.81	2		20	
Nickel, Total, ICP-MS	0.0084	0.0422	mg/Kg	16.9	20.3	19		20	
Phosphorus, Total, ICP-MS	8.4	42.2	mg/Kg	317	285	10		20	
Silver, Total, ICP-MS	0.0042	0.0211	mg/Kg	0.0247	0.021	16		20	
Zinc, Total, ICP-MS	0.042	0.211	mg/Kg	30.3	30.7	1		20	

MS:WG99206-5 L46069-5 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: 421240C

(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.0083	0.0416	mg/Kg	3.4	1.66	8.8	324	*	75--125
Cadmium, Total, ICP-MS	0.0042	0.0208	mg/Kg	0.0549	1.66	1.8	105		75--125
Chromium, Total, ICP-MS	0.017	0.0832	mg/Kg	16.2	1.66	15.5	MS/MSD %Rec. due to 4x rule)		
Copper, Total, ICP-MS	0.033	0.166	mg/Kg	12.5	1.66	22	MS/MSD %Rec. due to 4x rule)		
Lead, Total, ICP-MS	0.0062	0.00832	mg/Kg	2.86	1.66	10	431	*	75--125
Nickel, Total, ICP-MS	0.0083	0.0416	mg/Kg	16.9	1.66	16.6	MS/MSD %Rec. due to 4x rule)		
Phosphorus, Total, ICP-MS	8.3	41.6	mg/Kg	317	416	652	81		75--125
Silver, Total, ICP-MS	0.0042	0.0208	mg/Kg	0.0247	1.66	1.53	91		75--125
Zinc, Total, ICP-MS	0.042	0.208	mg/Kg	30.3	1.66	83.4	MS/MSD %Rec. due to 4x rule)		

LCS:WG99206-6 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: NONE

(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.1	0.512	mg/Kg	17	16.1	95		80--120
Cadmium, Total, ICP-MS	0.051	0.256	mg/Kg	2.94	3.18	108		80--120
Chromium, Total, ICP-MS	0.2	1.02	mg/Kg	121.9	75.4	62		40--80
Lead, Total, ICP-MS	0.077	0.102	mg/Kg	150	151	101		80--120
Nickel, Total, ICP-MS	0.1	0.512	mg/Kg	42.9	39.3	92		80--120
Zinc, Total, ICP-MS	0.51	2.56	mg/Kg	408	394	97		69--109

King County Environmental Lab Analytical QC Report

Workgroup: WG99225 (Streams Seds) Run ID: R130356

MB:WG99225-1 Matrix: SOLIDBLANK Listtype: MTICPMS-SED Method: EPA3050B/6020A (623V1) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	
Cadmium, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	
Chromium, Total, ICP-MS	0.016	0.082	mg/Kg	<MDL	
Copper, Total, ICP-MS	0.033	0.164	mg/Kg	<MDL	
Lead, Total, ICP-MS	0.0061	0.0082	mg/Kg	<MDL	
Nickel, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	
Phosphorus, Total, ICP-MS	8.2	41	mg/Kg	<MDL	
Silver, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	
Zinc, Total, ICP-MS	0.041	0.205	mg/Kg	<MDL	

SB:WG99225-2 MB:WG99225-1 Matrix: SOLIDBLANK Listtype: MTICPMS-SED Method: EPA3050B/6020A (623V1) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	1.64	1.56	95		85--115
Cadmium, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	1.64	1.55	94		85--115
Chromium, Total, ICP-MS	0.016	0.082	mg/Kg	<MDL	1.64	1.54	94		85--115
Copper, Total, ICP-MS	0.033	0.164	mg/Kg	<MDL	1.64	1.68	102		85--115
Lead, Total, ICP-MS	0.0061	0.0082	mg/Kg	<MDL	1.64	1.54	94		85--115
Nickel, Total, ICP-MS	0.0082	0.041	mg/Kg	<MDL	1.64	1.64	100		85--115
Phosphorus, Total, ICP-MS	8.2	41	mg/Kg	<MDL	410	376	92		85--115
Silver, Total, ICP-MS	0.0041	0.0205	mg/Kg	<MDL	1.64	1.59	97		85--115
Zinc, Total, ICP-MS	0.041	0.205	mg/Kg	<MDL	1.64	1.63	100		85--115

LD:WG99225-3 L46094-15 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: EPA3050B/6020A (623V1) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.0084	0.042	mg/Kg	2.83	3.07	8		20
Cadmium, Total, ICP-MS	0.0042	0.021	mg/Kg	0.244	0.25	3		20
Chromium, Total, ICP-MS	0.017	0.0839	mg/Kg	7.67	7.56	2		20
Copper, Total, ICP-MS	0.034	0.168	mg/Kg	11.1	11.4	2		20
Lead, Total, ICP-MS	0.0063	0.00839	mg/Kg	9.09	8.84	3		20
Nickel, Total, ICP-MS	0.0084	0.042	mg/Kg	6.93	6.78	2		20
Phosphorus, Total, ICP-MS	8.4	42	mg/Kg	261	275	5		20
Silver, Total, ICP-MS	0.0042	0.021	mg/Kg	0.0375	0.0353	6		20
Zinc, Total, ICP-MS	0.042	0.21	mg/Kg	83.7	84.6	1		20

MS:WG99225-4 L46094-15 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: EPA3050B/6020A (623V1) Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.0083	0.0417	mg/Kg	2.83	1.67	4.21	83		75--125

King County Environmental Lab Analytical QC Report

Cadmium, Total, ICP-MS	0.0042	0.0208	mg/Kg	0.244	1.67	1.79	93		75--125
Chromium, Total, ICP-MS	0.017	0.0834	mg/Kg	7.67	1.67	9.09	MS/MSD %Rec. due to 4x rule)		
Copper, Total, ICP-MS	0.033	0.167	mg/Kg	11.1	1.67	12.3	MS/MSD %Rec. due to 4x rule)		
Lead, Total, ICP-MS	0.0063	0.00834	mg/Kg	9.09	1.67	10.3	MS/MSD %Rec. due to 4x rule)		
Nickel, Total, ICP-MS	0.0083	0.0417	mg/Kg	6.93	1.67	8.3	MS/MSD %Rec. due to 4x rule)		
Phosphorus, Total, ICP-MS	8.3	41.7	mg/Kg	261	417	615	85		75--125
Silver, Total, ICP-MS	0.0042	0.0208	mg/Kg	0.0375	1.67	1.45	85		75--125
Zinc, Total, ICP-MS	0.042	0.208	mg/Kg	83.7	1.67	83.4	MS/MSD %Rec. due to 4x rule)		

LCS:WG99225-5 Matrix: SOIL Listtype: MTICPMS-SED Method: EPA3050B/6020A (623V1) Project: NONE

(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.13	0.648	mg/Kg	129	134	104		79--121
Cadmium, Total, ICP-MS	0.065	0.324	mg/Kg	68.3	76.6	112		80--120
Chromium, Total, ICP-MS	0.26	1.3	mg/Kg	70.4	70.8	101		73--127
Copper, Total, ICP-MS	0.52	2.59	mg/Kg	65.4	70.1	107		80--120
Lead, Total, ICP-MS	0.097	0.13	mg/Kg	131	140	107		80--120
Nickel, Total, ICP-MS	0.13	0.648	mg/Kg	55.4	57.5	104		80--120
Silver, Total, ICP-MS	0.065	0.324	mg/Kg	112	109	97		47--154
Zinc, Total, ICP-MS	0.65	3.24	mg/Kg	176	190	108		78--121

LCS:WG99225-6 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: EPA3050B/6020A (623V1) Project: NONE

(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.13	0.628	mg/Kg	17	15.3	90		80--120
Cadmium, Total, ICP-MS	0.063	0.314	mg/Kg	2.94	2.93	100		80--120
Chromium, Total, ICP-MS	0.25	1.26	mg/Kg	121.9	68.3	56		40--80
Lead, Total, ICP-MS	0.094	0.126	mg/Kg	150	132	88		80--120
Nickel, Total, ICP-MS	0.13	0.628	mg/Kg	42.9	37.3	87		80--120
Zinc, Total, ICP-MS	0.63	3.14	mg/Kg	408	377	92		69--109

King County Environmental Lab Analytical QC Report

Workgroup: WG97829 (BS#296 BNALLFULL) Run ID: R129947

MB:WG97829-1 Matrix: OTHR SOLID Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	
2-Chloronaphthalene	4	8	ug/Kg	<MDL	
2-Chlorophenol	4	8	ug/Kg	<MDL	
2-Methylnaphthalene	2	4	ug/Kg	<MDL	
2-Methylphenol	2	4	ug/Kg	<MDL	
2-Nitrophenol	10	20	ug/Kg	<MDL	
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
4-Methylphenol	4	8	ug/Kg	<MDL	
Acenaphthene	2	4	ug/Kg	<MDL	
Acenaphthylene	2	4	ug/Kg	<MDL	
Aniline	40	80	ug/Kg	<MDL	
Anthracene	2	4	ug/Kg	<MDL	
Benzo(a)anthracene	2	4	ug/Kg	<MDL	
Benzo(a)pyrene	2	4	ug/Kg	<MDL	
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	
Benzoic Acid	10	20	ug/Kg	<MDL	
Benzyl Alcohol	2	4	ug/Kg	<MDL	
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	12.8	B
Caffeine	4	8	ug/Kg	<MDL	
Carbazole	2	4	ug/Kg	<MDL	
Chrysene	2	4	ug/Kg	<MDL	
Coprostanol	40	80	ug/Kg	<MDL	
Di-N-Butyl Phthalate	4	8	ug/Kg	<MDL	
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	

King County Environmental Lab Analytical QC Report

Dibenzofuran	2	4	ug/Kg	<MDL					
Diethyl Phthalate	4	8	ug/Kg	<MDL					
Dimethyl Phthalate	4	8	ug/Kg	<MDL					
Fluoranthene	2	4	ug/Kg	<MDL					
Fluorene	2	4	ug/Kg	<MDL					
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL					
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL					
Hexachloroethane	1	2	ug/Kg	<MDL					
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL					
Isophorone	10	20	ug/Kg	<MDL					
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL					
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL					
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL					
Naphthalene	2	4	ug/Kg	<MDL					
Nitrobenzene	4	8	ug/Kg	<MDL					
Pentachlorophenol	10	20	ug/Kg	<MDL					
Phenanthrene	2	4	ug/Kg	<MDL					
Phenol	4	8	ug/Kg	<MDL					
Pyrene	2	4	ug/Kg	<MDL					

SB:WG97829-2 MB:WG97829-1 Matrix: OTHR SOLID Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	45.9	46		13--110
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	48.7	49		10--116
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	54.4	54		32--125
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	52.7	53		18--95
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	44.3	44		21--99
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	41.7	42		33--113
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	32	32		27--98
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	25	25		24--103
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	7.04	7	*	10--81
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	62.3	62		35--148
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	53.6	54		46--110
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	32.5	32		25--96
2-Chlorophenol	4	8	ug/Kg	<MDL	100	46.6	47		10--102
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	34.4	34		22--99
2-Methylphenol	2	4	ug/Kg	<MDL	100	27.2	27		16--91
2-Nitrophenol	10	20	ug/Kg	<MDL	100	45.2	45		21--98
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	69.6	70		47--113
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	60.1	60		39--101
4-Methylphenol	4	8	ug/Kg	<MDL	100	25.4	25		10--125
Acenaphthene	2	4	ug/Kg	<MDL	100	48.2	48		29--102
Acenaphthylene	2	4	ug/Kg	<MDL	100	51.9	52		31--101
Aniline	2	80	ug/Kg	<MDL	100	2.9	3	*	10--102
Anthracene	2	4	ug/Kg	<MDL	100	62.3	62		45--114
Benzo(a)anthracene	2	4	ug/Kg	<MDL	100	78.7	79		69--117

King County Environmental Lab Analytical QC Report

Benzo(a)pyrene	2	4	ug/Kg	<MDL	100	55.1	55		15--137							
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	100	81.2	81		50--121							
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	100	52.8	53		46--126							
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	100	68.3	68		58--128							
Benzoic Acid	10	20	ug/Kg	<MDL	100	69.3	69		10--170							
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	38.1	38		10--119							
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	80.1	80		15--183							
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	35.6	36		19--103							
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	37.2	37		18--82							
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	72	72		10--104							
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	12.8	100	86	73		10--182							
Caffeine	4	8	ug/Kg	<MDL	100	65.4	65		45--159							
Carbazole	2	4	ug/Kg	<MDL	100	60.8	61		44--179							
Chrysene	2	4	ug/Kg	<MDL	100	71.5	71		69--111							
Coprostanol	40	80	ug/Kg	<MDL	1000	394	39		10--159							
Di-N-Butyl Phthalate	4	8	ug/Kg	<MDL	100	81.9	82		17--180							
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	79.2	79		10--200							
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	100	70.1	70		53--129							
Dibenzofuran	2	4	ug/Kg	<MDL	100	52.3	52		37--97							
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	72.5	72		51--118							
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	46.7	47		38--114							
Fluoranthene	2	4	ug/Kg	<MDL	100	69.1	69		55--132							
Fluorene	2	4	ug/Kg	<MDL	100	55.3	55		39--106							
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	54.5	55		40--111							
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	43.8	44		10--97							
Hexachloroethane	1	2	ug/Kg	<MDL	100	50.9	51		17--92							
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	100	69.5	70		51--132							
Isophorone	10	20	ug/Kg	<MDL	100	39.9	40		10--131							
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	60	60		10--146							
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	49.3	49		14--101							
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	21.4	21		11--148							
Naphthalene	2	4	ug/Kg	<MDL	100	47.3	47		17--94							
Nitrobenzene	4	8	ug/Kg	<MDL	100	45.5	45		10--112							
Pentachlorophenol	10	20	ug/Kg	<MDL	100	53.2	53		38--124							
Phenanthrene	2	4	ug/Kg	<MDL	100	71.9	72		57--104							
Phenol	4	8	ug/Kg	<MDL	100	43.7	44		10--107							
Pyrene	2	4	ug/Kg	<MDL	100	68.7	69		48--132							

MSD:WG97829-4 MS:WG97829-3 L46094-1 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C

(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	63.8	64		10--115	100	69.1	69		8		35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	55.3	55		10--105	100	56	56		2		35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	92.5	93		16--162	100	96	96		3		35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	70.5	71		10--103	100	72.4	72		1		35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	43	43		10--104	100	43.4	43		0		35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	83.5	83		23--166	100	104	104		22		35

King County Environmental Lab Analytical QC Report

2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	89.4	89		26--153	100	96.5	97		9		35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	62.1	62		24--142	100	68.1	68		9		35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	52.4	52		10--150	100	58	58		11		35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	64.3	64		27--166	100	82.8	83		26		35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	72.5	73		10--183	100	83.3	83		13		35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	41.4	41		26--111	100	45.4	45		9		35
2-Chlorophenol	4	8	ug/Kg	<MDL	100	63.6	64		10--112	100	66	66		3		35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	57.9	58		22--112	100	59.9	60		3		35
2-Methylphenol	2	4	ug/Kg	<MDL	100	41.6	42		10--142	100	44.3	44		5		35
2-Nitrophenol	10	20	ug/Kg	<MDL	100	60.8	61		20--107	100	64.2	64		5		35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	102	102		30--146	100	105	105		3		35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	85.2	85		25--139	100	97.3	97		13		35
4-Methylphenol	4	8	ug/Kg	<MDL	100	50.7	51		10--163	100	54.8	55		8		35
Acenaphthene	2	4	ug/Kg	<MDL	100	73.1	73		25--130	100	78.7	79		8		35
Acenaphthylene	2	4	ug/Kg	<MDL	100	82	82		27--132	100	87.7	88		7		35
Aniline	10	80	ug/Kg	<MDL	100	24	24		10--67	100	22	22		9		35
Anthracene	2	4	ug/Kg	<MDL	100	86.8	87		10--181	100	95.3	95		9		35
Benzo(a)anthracene	2	4	ug/Kg	7.51	100	108	101		32--168	100	111	103		2		35
Benzo(a)pyrene	2	4	ug/Kg	8.98	100	101	92		10--200	100	101	93		1		35
Benzo(b)fluoranthene	2	4	ug/Kg	14.5	100	126	111		10--199	100	122	108		3		35
Benzo(g,h,i)perylene	2	4	ug/Kg	6.41	100	56.4	50		10--173	100	57.6	51		2		35
Benzo(k)fluoranthene	2	4	ug/Kg	10.7	100	102	92		10--192	100	100	90		2		35
Benzoic Acid	10	20	ug/Kg	133	100	190	57		10--158	100	187	55		4		35
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	54.5	55		10--138	100	63.2	63		14		35
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	103	103		41--145	100	119	119		14		35
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	45.7	46		23--103	100	49.8	50		8		35
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	48.6	49		10--80	100	47.7	48		2		35
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	97.4	97		10--142	100	102	102		5		35
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	59.7	100	195	136		10--189	100	211	152		11		35
Caffeine	4	8	ug/Kg	<MDL	100	59.1	59		17--195	100	66.9	67		13		35
Carbazole	2	4	ug/Kg	<MDL	100	63	63		16--200	100	71.5	71		12		35
Chrysene	2	4	ug/Kg	11	100	97.4	86		14--184	100	96.9	86		0		35
Coprostanol	40	80	ug/Kg	<MDL	1000	578	58		10--183	1000	544	54		7		35
Di-N-Butyl Phthalate	4	8	ug/Kg	<MDL	100	88.6	89		10--194	100	102	102		14		35
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	136	136		52--151	100	139	139		2		35
Dibenzo(a,h)anthracene	2	4	ug/Kg	2.3	100	69.9	68		10--166	100	74.5	72		6		35
Dibenzofuran	2	4	ug/Kg	<MDL	100	80.5	81		21--134	100	87.4	87		7		35
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	75	75		31--150	100	88.1	88		16		35
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	71.5	72		13--162	100	82.7	83		14		35
Fluoranthene	2	4	ug/Kg	8.86	100	96.9	88		12--188	100	92.8	84		5		35
Fluorene	2	4	ug/Kg	<MDL	100	75.8	76		22--147	100	84.5	85		11		35
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	84.3	84		18--151	100	90.9	91		8		35
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	59.3	59		10--97	100	63.3	63		7		35
Hexachloroethane	1	2	ug/Kg	<MDL	100	53.9	54		10--89	100	54.1	54		0		35
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	6.23	100	73.3	67		10--177	100	77.7	71		6		35
Isophorone	10	20	ug/Kg	<MDL	100	60.8	61		16--130	100	61	61		0		35
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	69.2	69		10--176	100	62.5	62		11		35
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	52.4	52		10--119	100	51.2	51		2		35

King County Environmental Lab Analytical QC Report

N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	71.2	71		10--169	100	89.9	90		24		35
Naphthalene	2	4	ug/Kg	<MDL	100	62.4	62		12--97	100	64.3	64		3		35
Nitrobenzene	4	8	ug/Kg	<MDL	100	61.1	61		10--105	100	63.2	63		3		35
Pentachlorophenol	10	20	ug/Kg	<MDL	100	81.4	81		17--170	100	91	91		12		35
Phenanthrene	2	4	ug/Kg	10.3	100	115	104		10--200	100	107	97		7		35
Phenol	4	8	ug/Kg	25.2	100	64.2	39		10--127	100	62.7	37		5		35
Pyrene	2	4	ug/Kg	15.8	100	109	93		20--174	100	114	98		5		35

SRM:WG97829-5 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Anthracene	270	533	ug/Kg	1750	820	47		28--98
Benzo(a)anthracene	270	533	ug/Kg	4660	4250	91		66--124
Benzo(a)pyrene	270	533	ug/Kg	4240	3370	79		60--116
Benzo(b)fluoranthene	270	533	ug/Kg	3820	3340	88		52--190
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	1790	64		15--121
Benzo(k)fluoranthene	270	533	ug/Kg	2270	3030	133		60--146
Chrysene	270	533	ug/Kg	4800	4940	103		77--136
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	716	171		10--200
Fluoranthene	270	533	ug/Kg	8800	6580	75		45--126
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	2040	74		33--121
Naphthalene	270	533	ug/Kg	1630	380	23		10--29
Phenanthrene	270	533	ug/Kg	5200	5270	101		51--106
Pyrene	270	533	ug/Kg	9570	9180	96		36--135

LD:WG97829-6 L46094-2 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	<MDL			35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			35
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	<MDL			35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	<MDL			35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	<MDL			35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	<MDL			35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	<MDL			35
2-Chlorophenol	4	8	ug/Kg	<MDL	<MDL			35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	<MDL			35
2-Methylphenol	2	4	ug/Kg	<MDL	<MDL			35
2-Nitrophenol	10	20	ug/Kg	<MDL	<MDL			35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			35

King County Environmental Lab Analytical QC Report

4-Methylphenol	4	8	ug/Kg	44	49.6	12		35								
Acenaphthene	2	4	ug/Kg	<MDL	<MDL			35								
Acenaphthylene	2	4	ug/Kg	<MDL	<MDL			35								
Aniline	40	80	ug/Kg	<MDL	<MDL			35								
Anthracene	2	4	ug/Kg	<MDL	<MDL			35								
Benzo(a)anthracene	2	4	ug/Kg	9.38	7.85	18		35								
Benzo(a)pyrene	2	4	ug/Kg	11.7	9.74	18		35								
Benzo(b)fluoranthene	2	4	ug/Kg	13.7	12.3	10		35								
Benzo(g,h,i)perylene	2	4	ug/Kg	8.17	7.03	15		35								
Benzo(k)fluoranthene	2	4	ug/Kg	11.8	11.1	7		35								
Benzoic Acid	10	20	ug/Kg	121	275	78	*	35								
Benzyl Alcohol	2	4	ug/Kg	<MDL	<MDL			35								
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	60.1	47.7	23		35								
Caffeine	4	8	ug/Kg	<MDL	<MDL			35								
Carbazole	2	4	ug/Kg	<MDL	<MDL			35								
Chrysene	2	4	ug/Kg	12.5	11	13		35								
Coprostanol	40	80	ug/Kg	<MDL	<MDL			35								
Di-N-Butyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Dibenzo(a,h)anthracene	2	4	ug/Kg	2.9	3			35								
Dibenzofuran	2	4	ug/Kg	<MDL	<MDL			35								
Diethyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Dimethyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Fluoranthene	2	4	ug/Kg	9.6	9.25	4		35								
Fluorene	2	4	ug/Kg	<MDL	<MDL			35								
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			35								
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	<MDL			35								
Hexachloroethane	1	2	ug/Kg	<MDL	<MDL			35								
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	8.04	7.17	11		35								
Isophorone	10	20	ug/Kg	<MDL	<MDL			35								
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	<MDL			35								
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	<MDL			35								
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	<MDL			35								
Naphthalene	2	4	ug/Kg	<MDL	<MDL			35								
Nitrobenzene	4	8	ug/Kg	<MDL	<MDL			35								
Pentachlorophenol	10	20	ug/Kg	<MDL	<MDL			35								
Phenanthrene	2	4	ug/Kg	13.3	9.91	29		35								
Phenol	4	8	ug/Kg	<MDL	<MDL			35								
Pyrene	2	4	ug/Kg	20	15.4	26		35								

King County Environmental Lab Analytical QC Report

Surrogate:	2,4,6-Tribromo phenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-1,2-Dichlorobenzene	d4-2-Chlorophenol	d5-Nitrobenzene	5-Phenol
(Lab Limits)	29--112	31--101	10--112	51--130	24--91	11--105	28--94	10--106
L46069-1	71	31	56	88	48	62	30	47
L46069-2	63	63	61	107	52	66	70	50
L46069-3	70	36	54	89	51	61	64	36
L46069-4	67	49	57	87	49	69	64	56
L46069-5	75	31	47	86	39	49	51	35
L46069-6	67	41	45	85	39	53	42	51
L46069-7	77	39	62	100	54	66	66	48
L46069-8	81	32	43	102	41	45	49	28
L46069-9	55	37	59	85	53	65	67	47
L46094-1	72	32	56	87	47	60	54	49
L46094-2	77	33	55	90	48	58	59	39
L46094-3	63	56	54	101	45	57	62	43
L46094-4	56	62	67	98	61	70	69	45
L46094-5	68	48	54	82	55	69	57	61
L46094-7	64	38	49	86	52	65	55	56
L46094-8	73	56	55	87	54	70	60	62
L46094-9	70	45	53	85	53	69	59	62
L46094-10	78	41	53	96	52	66	58	56
L46094-11	83	60	61	101	59	75	66	70
L46094-16	62	52	49	152 L	42	69	55	62
WG97829-1	70	34	37	89	43	43	45	29
WG97829-2	53	28 G	41	74	53	48	42	40
WG97829-3	67	33	56	84	60	63	56	46
WG97829-4	79	33	61	99	63	66	60	48
WG97829-5	99	82	109	129	89	91	94	103
WG97829-6	89	36	57	102	49	65	58	50

King County Environmental Lab Analytical QC Report

Workgroup: WG97939 (bs#297 bnallfull) Run ID: R130308

MB:WG97939-1 Matrix: OTHR SOLID Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	
2-Chloronaphthalene	4	8	ug/Kg	<MDL	
2-Chlorophenol	4	8	ug/Kg	<MDL	
2-Methylnaphthalene	2	4	ug/Kg	<MDL	
2-Methylphenol	2	4	ug/Kg	<MDL	
2-Nitrophenol	10	20	ug/Kg	<MDL	
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
4-Methylphenol	4	8	ug/Kg	<MDL	
Acenaphthene	2	4	ug/Kg	<MDL	
Acenaphthylene	2	4	ug/Kg	<MDL	
Aniline	40	80	ug/Kg	<MDL	
Anthracene	2	4	ug/Kg	<MDL	
Benzo(a)anthracene	2	4	ug/Kg	<MDL	
Benzo(a)pyrene	2	4	ug/Kg	<MDL	
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	
Benzoic Acid	10	20	ug/Kg	<MDL	
Benzyl Alcohol	2	4	ug/Kg	<MDL	
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	12.1	B
Caffeine	4	8	ug/Kg	<MDL	
Carbazole	2	4	ug/Kg	<MDL	
Chrysene	2	4	ug/Kg	<MDL	
Coprostanol	40	80	ug/Kg	<MDL	
Di-N-Butyl Phthalate	4	8	ug/Kg	<MDL	
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	

King County Environmental Lab Analytical QC Report

Dibenzofuran	2	4	ug/Kg	<MDL												
Diethyl Phthalate	4	8	ug/Kg	<MDL												
Dimethyl Phthalate	4	8	ug/Kg	<MDL												
Fluoranthene	2	4	ug/Kg	<MDL												
Fluorene	2	4	ug/Kg	<MDL												
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL												
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL												
Hexachloroethane	1	2	ug/Kg	<MDL												
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL												
Isophorone	10	20	ug/Kg	<MDL												
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL												
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL												
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL												
Naphthalene	2	4	ug/Kg	<MDL												
Nitrobenzene	4	8	ug/Kg	<MDL												
Pentachlorophenol	10	20	ug/Kg	<MDL												
Phenanthrene	2	4	ug/Kg	<MDL												
Phenol	4	8	ug/Kg	<MDL												
Pyrene	2	4	ug/Kg	<MDL												

SB:WG97939-2 MB:WG97939-1 Matrix: OTHR SOLID Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	68.8	69		13--110
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	58.5	58		10--116
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	84.3	84		32--125
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	71.9	72		18--95
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	44	44		21--99
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	91.1	91		33--113
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	66.4	66		27--98
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	28	28		24--103
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	2.76	3	*	10--81
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	99.2	99		35--148
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	93.5	93		46--110
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	37.1	37		25--96
2-Chlorophenol	4	8	ug/Kg	<MDL	100	58.5	59		10--102
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	40.6	41		22--99
2-Methylphenol	2	4	ug/Kg	<MDL	100	22.2	22		16--91
2-Nitrophenol	10	20	ug/Kg	<MDL	100	62.5	63		21--98
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	97.3	97		47--113
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	105	105	*	39--101
4-Methylphenol	4	8	ug/Kg	<MDL	100	15.2	15		10--125
Acenaphthene	2	4	ug/Kg	<MDL	100	72.5	73		29--102
Acenaphthylene	2	4	ug/Kg	<MDL	100	76	76		31--101
Aniline	4	80	ug/Kg	<MDL	100	5.4	5	*	10--102
Anthracene	2	4	ug/Kg	<MDL	100	87.2	87		45--114
Benzo(a)anthracene	2	4	ug/Kg	<MDL	100	108	108		69--117

King County Environmental Lab Analytical QC Report

Benzo(a)pyrene	2	4	ug/Kg	<MDL	100	80.2	80		15--137							
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	100	98.8	99		50--121							
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	100	84.8	85		46--126							
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	100	91.6	92		58--128							
Benzoic Acid	10	20	ug/Kg	<MDL	100	74.7	75		10--170							
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	47.6	48		10--119							
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	107	107		15--183							
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	35.8	36		19--103							
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	46.7	47		18--82							
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	89.7	90		10--104							
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	12.1	100	113	101		10--182							
Caffeine	4	8	ug/Kg	<MDL	100	84.2	84		45--159							
Carbazole	2	4	ug/Kg	<MDL	100	80.1	80		44--179							
Chrysene	2	4	ug/Kg	<MDL	100	90.6	91		69--111							
Coprostanol	40	80	ug/Kg	<MDL	1000	689	69		10--159							
Di-N-Butyl Phthalate	4	8	ug/Kg	<MDL	100	108	108		17--180							
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	108	108		10--200							
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	100	99.2	99		53--129							
Dibenzofuran	2	4	ug/Kg	<MDL	100	86.8	87		37--97							
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	105	105		51--118							
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	93.8	94		38--114							
Fluoranthene	2	4	ug/Kg	<MDL	100	94.3	94		55--132							
Fluorene	2	4	ug/Kg	<MDL	100	91.8	92		39--106							
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	84.5	85		40--111							
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	62	62		10--97							
Hexachloroethane	1	2	ug/Kg	<MDL	100	58.6	59		17--92							
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	100	98.9	99		51--132							
Isophorone	10	20	ug/Kg	<MDL	100	41.6	42		10--131							
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	53.5	53		10--146							
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	56.1	56		14--101							
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	16.6	17		11--148							
Naphthalene	2	4	ug/Kg	<MDL	100	61.4	61		17--94							
Nitrobenzene	4	8	ug/Kg	<MDL	100	63.6	64		10--112							
Pentachlorophenol	10	20	ug/Kg	<MDL	100	75.4	75		38--124							
Phenanthrene	2	4	ug/Kg	<MDL	100	102	102		57--104							
Phenol	4	8	ug/Kg	<MDL	100	43.3	43		10--107							
Pyrene	2	4	ug/Kg	<MDL	100	89.7	90		48--132							

MSD:WG97939-4 MS:WG97939-3 L46094-12 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C

(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	64.2	64		10--115	100	58.1	58		10		35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	53.7	54		10--105	100	49.4	49		10		35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	105	105		16--162	100	109	109		4		35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	68.2	68		10--103	100	56.9	57		18		35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	43.5	44		10--104	100	36.2	36		20		35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	56.4	56		23--166	100	75.9	76		30		35

King County Environmental Lab Analytical QC Report

2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	76.8	77		26--153	100	86.2	86		11		35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	109	109		24--142	100	101	101		8		35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	95.3	95		10--150	100	91.2	91		4		35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	61.1	61		27--166	100	61.1	61		0		35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	69.7	70		10--183	100	69.3	69		1		35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	67.9	68		26--111	100	70.1	70		3		35
2-Chlorophenol	4	8	ug/Kg	<MDL	100	65.4	65		10--112	100	63.8	64		2		35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	95.6	96		22--112	100	91.2	91		5		35
2-Methylphenol	2	4	ug/Kg	<MDL	100	68.6	69		10--142	100	70.5	70		1		35
2-Nitrophenol	10	20	ug/Kg	<MDL	100	66.5	66		20--107	100	64.4	64		3		35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	114	114		30--146	100	115	115		1		35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	82.1	82		25--139	100	80.7	81		1		35
4-Methylphenol	4	8	ug/Kg	<MDL	100	84.9	85		10--163	100	85.8	86		1		35
Acenaphthene	2	4	ug/Kg	2	100	83.9	82		25--130	100	87.2	85		4		35
Acenaphthylene	2	4	ug/Kg	<MDL	100	93.8	94		27--132	100	98.2	98		4		35
Aniline	4	80	ug/Kg	<MDL	100	12	12		10--67	100	10	10		18		35
Anthracene	2	4	ug/Kg	7.99	100	102	94		10--181	100	109	101		7		35
Benzo(a)anthracene	2	4	ug/Kg	61.3	100	179	118		32--168	100	188	127		7		35
Benzo(a)pyrene	2	4	ug/Kg	82.2	100	195	113		10--200	100	181	98		14		35
Benzo(b)fluoranthene	2	4	ug/Kg	144	100	247	102		10--199	100	249	105		3		35
Benzo(g,h,i)perylene	2	4	ug/Kg	88.3	100	164	76		10--173	100	174	86		12		35
Benzo(k)fluoranthene	2	4	ug/Kg	129	100	269	140		10--192	100	270	141		1		35
Benzoic Acid	10	20	ug/Kg	153	100	238	85		10--158	100	239	86		1		35
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	70.1	70		10--138	100	67.5	67		4		35
Benzyl Butyl Phthalate	4	8	ug/Kg	23.4	100	148	125		41--145	100	155	131		5		35
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	68.8	69		23--103	100	67.8	68		1		35
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	45.8	46		10--80	100	42.1	42		9		35
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	141	141		10--142	100	106	106		28		35
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	722	100	819	98		10--189	100	800	78		23		35
Caffeine	4	8	ug/Kg	<MDL	100	72	72		17--195	100	68.9	69		4		35
Carbazole	2	4	ug/Kg	8.79	100	76	67		16--200	100	81.7	73		9		35
Chrysene	2	4	ug/Kg	111	100	214	103		14--184	100	202	91		12		35
Coprostanol	40	80	ug/Kg	<MDL	1000	811	81		10--183	1000	745	74		9		35
Di-N-Butyl Phthalate	4	8	ug/Kg	11.1	100	109	97		10--194	100	108	97		0		35
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	146	146		52--151	100	164	164	*	12		35
Dibenzo(a,h)anthracene	2	4	ug/Kg	25.1	100	101	76		10--166	100	118	93		20		35
Dibenzofuran	2	4	ug/Kg	<MDL	100	82.9	83		21--134	100	85.4	85		2		35
Diethyl Phthalate	4	8	ug/Kg	28.5	100	84.4	56		31--150	100	94.6	66		16		35
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	66.8	67		13--162	100	67.3	67		0		35
Fluoranthene	2	4	ug/Kg	123	100	212	89		12--188	100	239	116		26		35
Fluorene	2	4	ug/Kg	6.78	100	73.3	67		22--147	100	73.6	67		0		35
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	95.8	96		18--151	100	99	99		3		35
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	59	59		10--97	100	55.8	56		5		35
Hexachloroethane	1	2	ug/Kg	<MDL	100	48.9	49		10--89	100	41.2	41		18		35
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	80.4	100	153	73		10--177	100	170	90		21		35
Isophorone	10	20	ug/Kg	<MDL	100	89.1	89		16--130	100	85.6	86		3		35
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	128	128		10--176	100	121	121		6		35
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	52.2	52		10--119	100	36.6	37		34		35

King County Environmental Lab Analytical QC Report

N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	57.8	58		10--169	100	57.4	57		2		35
Naphthalene	2	4	ug/Kg	<MDL	100	65.7	66		12--97	100	63	63		5		35
Nitrobenzene	4	8	ug/Kg	<MDL	100	58.3	58		10--105	100	54.7	55		5		35
Pentachlorophenol	10	20	ug/Kg	<MDL	100	91.4	91		17--170	100	99.4	99		8		35
Phenanthrene	2	4	ug/Kg	52.9	100	166	114		10--200	100	167	114		0		35
Phenol	4	8	ug/Kg	<MDL	100	68	68		10--127	100	61.5	62		9		35
Pyrene	2	4	ug/Kg	143	100	240	97		20--174	100	246	103		6		35

SRM:WG97939-5 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Anthracene	270	533	ug/Kg	1750	731	42		28--98
Benzo(a)anthracene	270	533	ug/Kg	4660	4210	90		66--124
Benzo(a)pyrene	270	533	ug/Kg	4240	3150	74		60--116
Benzo(b)fluoranthene	270	533	ug/Kg	3820	3340	87		52--190
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	1990	71		15--121
Benzo(k)fluoranthene	270	533	ug/Kg	2270	3250	143		60--146
Chrysene	270	533	ug/Kg	4800	4500	94		77--136
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	813	194		10--200
Fluoranthene	270	533	ug/Kg	8800	6190	70		45--126
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	1950	71		33--121
Naphthalene	270	533	ug/Kg	1630	280	17		10--29
Phenanthrene	270	533	ug/Kg	5200	4500	86		51--106
Pyrene	270	533	ug/Kg	9570	7570	79		36--135

LD:WG97939-6 L46094-13 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	<MDL			35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			35
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	<MDL			35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	<MDL			35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	<MDL			35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	<MDL			35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	<MDL			35
2-Chlorophenol	4	8	ug/Kg	<MDL	<MDL			35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	<MDL			35
2-Methylphenol	2	4	ug/Kg	<MDL	<MDL			35
2-Nitrophenol	10	20	ug/Kg	<MDL	<MDL			35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			35

King County Environmental Lab Analytical QC Report

4-Methylphenol	4	8	ug/Kg	<MDL	<MDL			35								
Acenaphthene	2	4	ug/Kg	<MDL	<MDL			35								
Acenaphthylene	2	4	ug/Kg	<MDL	<MDL			35								
Aniline	40	80	ug/Kg	<MDL	<MDL			35								
Anthracene	2	4	ug/Kg	7.96	6.64	18		35								
Benzo(a)anthracene	2	4	ug/Kg	60.5	51.9	15		35								
Benzo(a)pyrene	2	4	ug/Kg	91.5	73	23		35								
Benzo(b)fluoranthene	2	4	ug/Kg	155	154	0		35								
Benzo(g,h,i)perylene	2	4	ug/Kg	101	76.2	28		35								
Benzo(k)fluoranthene	2	4	ug/Kg	145	123	16		35								
Benzoic Acid	10	20	ug/Kg	189	179	5		35								
Benzyl Alcohol	2	4	ug/Kg	8.53	6.75	23		35								
Benzyl Butyl Phthalate	4	8	ug/Kg	33.4	25.5	27		35								
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	<MDL			35								
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	662	517	25		35								
Caffeine	4	8	ug/Kg	<MDL	<MDL			35								
Carbazole	2	4	ug/Kg	7.81	6.94	12		35								
Chrysene	2	4	ug/Kg	118	92.2	25		35								
Coprostanol	40	80	ug/Kg	<MDL	<MDL			35								
Di-N-Butyl Phthalate	4	8	ug/Kg	18.2	15	19		35								
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Dibenzo(a,h)anthracene	2	4	ug/Kg	32.7	26.3	22		35								
Dibenzofuran	2	4	ug/Kg	2.4	<MDL			35								
Diethyl Phthalate	4	8	ug/Kg	<MDL	<MDL			35								
Dimethyl Phthalate	4	8	ug/Kg	10.5	9.81	7		35								
Fluoranthene	2	4	ug/Kg	131	101	26		35								
Fluorene	2	4	ug/Kg	6.99	6.49	8		35								
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			35								
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	<MDL			35								
Hexachloroethane	1	2	ug/Kg	<MDL	<MDL			35								
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	97.4	74.9	26		35								
Isophorone	10	20	ug/Kg	<MDL	<MDL			35								
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	<MDL			35								
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	<MDL			35								
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	<MDL			35								
Naphthalene	2	4	ug/Kg	<MDL	<MDL			35								
Nitrobenzene	4	8	ug/Kg	<MDL	<MDL			35								
Pentachlorophenol	10	20	ug/Kg	<MDL	<MDL			35								
Phenanthrene	2	4	ug/Kg	54.2	44.7	19		35								
Phenol	4	8	ug/Kg	<MDL	<MDL			35								
Pyrene	2	4	ug/Kg	161	122	28		35								

King County Environmental Lab Analytical QC Report

Surrogate:	2,4,6-Tribromo phenol	2-Fluorobiphenyl	2-Fluorophenol	d14-Terphenyl	d4-1,2-Dichlorobenzene	d4-2-Chlorophenol	d5-Nitrobenzene	5-Phenol
(Lab Limits)	29--112	31--101	10--112	51--130	24--91	11--105	28--94	10--106
L46094-12	66	65	43	97	38	57	53	52
L46094-13	65	68	58	108	51	63	59	51
L46094-14	69	50	60	90	59	78	65	65
L46094-15	60	52	54	125	53	71	63	60
L46094-17	62	55	53	93	49	69	57	57
L46094-18	66	37	50	99	44	61	50	53
L46094-19	80	52	51	70	40	47	53	44
L46094-20	78	54	54	64	42	53	55	52
L46094-21	77	53	55	74	40	59	52	63
L46094-22	76	57	48	68	36	56	45	61
L46094-23	83	58	52	73	43	61	93	66
L46094-24	82	54	46	71	34	51	46	57
L46094-25	77	56	51	75	50	68	61	70
L46094-26	87	56	53	69	46	61	54	62
L46094-27	81	50	49	69	38	49	49	49
L46094-28	83	55	51	67	37	55	54	59
L46094-29	86	57	47	70	39	57	53	59
WG97939-1	33	24 G	21	83	38	29	43	25
WG97939-2	65	37	50	93	61	58	57	42
WG97939-3	56	56	48	93	57	62	52	53
WG97939-4	56	59	52	100	52	62	49	55
WG97939-5	93	69	67	114	56	82	70	81
WG97939-6	61	62	53	105	44	58	58	49

King County Environmental Lab Analytical QC Report

Workgroup: WG97830 (BS#296 EDC) Run ID: R130404

MB:WG97830-1 Matrix: OTHR SOLID Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	
Bisphenol A	10	20	ug/Kg	<MDL	
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	

SB:WG97830-2 MB:WG97830-1 Matrix: OTHR SOLID Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	200	134	67		25--150
Bisphenol A	10	20	ug/Kg	<MDL	100	34.5	34		25--150
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	52.9	53		25--150

MSD:WG97830-4 MS:WG97830-3 L46094-1 Matrix: FRSHWTRSED Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	200	162	81		25--150	200	188	94		15		35
Bisphenol A	10	20	ug/Kg	<MDL	100	82.6	83		25--150	100	97.4	97		16		35
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	85.9	86		25--150	100	96.3	96		11		35

LD:WG97830-6 L46094-2 Matrix: FRSHWTRSED Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	<MDL			35
Bisphenol A	10	20	ug/Kg	<MDL	<MDL			35
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	<MDL			35

Surrogate:	PHENOL
(Lab Limits)	25--150
L46069-1	84
L46069-2	97
L46069-3	86
L46069-4	86
L46069-5	78
L46069-6	79
L46069-7	91
L46069-8	84
L46069-9	72
L46094-1	84
L46094-2	86
L46094-3	96
L46094-4	96

King County Environmental Lab Analytical QC Report

L46094-5	79															
L46094-7	87															
L46094-8	84															
L46094-9	82															
L46094-10	88															
L46094-11	92															
L46094-16	88															
WG97830-1	42															
WG97830-2	51															
WG97830-3	83															
WG97830-4	95															
WG97830-6	94															

King County Environmental Lab Analytical QC Report

Workgroup: WG97940 (bs#297 edc) Run ID: R130412

MB:WG97940-1 Matrix: OTHR SOLID Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Bis(2-ethylhexyl)adipate	2	20	ug/Kg	8.9	B
Bisphenol A	10	20	ug/Kg	<MDL	
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	

SB:WG97940-2 MB:WG97940-1 Matrix: OTHR SOLID Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	8.9	200	166	78		25--150
Bisphenol A	10	20	ug/Kg	<MDL	100	39.4	39		25--150
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	57.5	58		25--150

MSD:WG97940-4 MS:WG97940-3 L46094-12 Matrix: FRSHWTRSED Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C

(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	200	185	93		25--150	200	196	98		5		35
Bisphenol A	10	20	ug/Kg	<MDL	100	103	103		25--150	100	104	104		1		35
Total 4-Nonylphenol	20	40	ug/Kg	246	100	321	75		25--150	100	342	96		25		35

LD:WG97940-6 L46094-13 Matrix: FRSHWTRSED Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	<MDL			35
Bisphenol A	10	20	ug/Kg	<MDL	<MDL			35
Total 4-Nonylphenol	20	40	ug/Kg	177	145	20		35

Surrogate:	PHENOL
(Lab Limits)	25--150
L46094-12	80
L46094-13	94
L46094-14	97
L46094-15	85
L46094-17	91
L46094-18	82
L46094-19	89
L46094-20	90
L46094-21	83
L46094-22	94
L46094-23	95
L46094-24	96
L46094-25	91

King County Environmental Lab Analytical QC Report

L46094-26	91															
L46094-27	90															
L46094-28	96															
L46094-29	97															
WG97940-1	5 X															
WG97940-2	56															
WG97940-3	80															
WG97940-4	92															
WG97940-6	92															

King County Environmental Lab Analytical QC Report

Workgroup: WG97805 (PPLLS#75 PCB LL) Run ID: R128820

MB:WG97805-1 Matrix: OTHR SOLID Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	
Total Aroclors	0.83	1.67	ug/Kg	<MDL	

SB:WG97805-2 MB:WG97805-1 Matrix: OTHR SOLID Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	13.8	55		39--121
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	24.1	97		53--140

MSD:WG97805-4 MS:WG97805-3 L46069-2 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	24	96		32--164	25	23.6	94		2		35
Aroclor 1260	0.83	1.67	ug/Kg	5.73	25	26.8	84		28--144	25	25.8	80		5		35

SRM:WG97805-5 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Aroclor 1254	2.7	5.33	ug/Kg	112	94.9	85		57--139

LD:WG97805-6 L46069-3 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	<MDL			35
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	<MDL			35
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1254	0.83	1.67	ug/Kg	1.3	<MDL			35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	<MDL			35
Total Aroclors	0.83	1.67	ug/Kg	1.3	<MDL			35

King County Environmental Lab Analytical QC Report

Surrogate:	2,4,5,6-Tetra chloro m xylene	Decachl oro biphenyl
(Lab Limits)	30--134	15--155
L46069-1	71	83
L46069-2	74	92
L46069-3	72	92
L46069-4	83	89
L46069-5	73	91
L46069-6	74	89
L46069-7	63	89
L46069-8	69	84
L46069-9	76	104
L46094-1	66	88
L46094-2	74	82
L46094-3	78	93
L46094-4	63	85
L46094-5	65	87
L46094-7	55	94
L46094-8	73	99
L46094-9	64	84
L46094-10	57	94
L46094-11	81	93
L46094-16	75	88
WG97805-1	35	99
WG97805-2	43	117
WG97805-3	108	118
WG97805-4	104	111
WG97805-5	91	106
WG97805-6	80	81

King County Environmental Lab Analytical QC Report

Workgroup: WG97965 (PPLLS#76) Run ID: R129352

MB:WG97965-1 Matrix: OTHR SOLID Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	
Total Aroclors	0.83	1.67	ug/Kg	<MDL	

SB:WG97965-2 MB:WG97965-1 Matrix: OTHR SOLID Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	17.7	71		39--121
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	23.3	93		53--140

MSD:WG97965-4 MS:WG97965-3 L46094-19 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: 421240C

(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	16.3	65		32--164	25	16.1	64		2		35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	18.2	73		28--144	25	18.2	73		0		35

SRM:WG97965-5 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE

(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Aroclor 1254	2.7	5.33	ug/Kg	112	128	114		57--139

LD:WG97965-6 L46094-25 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	<MDL			35
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	<MDL			35
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	<MDL			35
Total Aroclors	0.83	1.67	ug/Kg	<MDL	<MDL			35

King County Environmental Lab Analytical QC Report

Surrogate:	2,4,5,6-Tetra chloro m xylene	Decachl oro biphenyl														
(Lab Limits)	30--134	15--155														
L46094-12	76	80														
L46094-13	79	80														
L46094-14	77	78														
L46094-15	82	77														
L46094-17	77	96														
L46094-18	77	89														
L46094-19	74	80														
L46094-20	87	79														
L46094-21	96	76														
L46094-22	99	90														
L46094-23	96	85														
L46094-24	94	85														
L46094-25	91	86														
L46094-26	99	85														
L46094-27	85	89														
L46094-28	91	91														
L46094-29	94	83														
WG97965-1	59	103														
WG97965-2	77	126														
WG97965-3	82	96														
WG97965-4	78	98														
WG97965-5	83	120														
WG97965-6	86	93														

King County Environmental Lab Analytical QC Report

Workgroup: WG97804 (PPLLA#75 Pest LL) Run ID: R128444

MB:WG97804-1 Matrix: OTHR SOLID Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	
Aldrin	0.67	1.33	ug/Kg	<MDL	
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	
Beta-BHC	0.33	0.667	ug/Kg	<MDL	
Delta-BHC	0.33	0.667	ug/Kg	<MDL	
Dieldrin	0.67	1.33	ug/Kg	<MDL	
Endosulfan I	0.67	1.33	ug/Kg	<MDL	
Endosulfan II	0.67	1.33	ug/Kg	<MDL	
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	
Endrin	0.67	1.33	ug/Kg	<MDL	
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	
Gamma-Chlordane	0.33	0.667	ug/Kg	<MDL	
Heptachlor	0.33	0.667	ug/Kg	<MDL	
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	
Methoxychlor	3.3	6.67	ug/Kg	<MDL	
Toxaphene	6.7	13.3	ug/Kg	<MDL	

SB:WG97804-2 MB:WG97804-1 Matrix: OTHR SOLID Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	5.4	81		78--121
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	5.76	86		75--111
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	5.21	78		57--145
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	3.3	49		28--113
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	2.63	39		20--99
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.91	74		66--102
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	2.86	43	*	63--108
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	5.44	82		58--139
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	4.76	71		62--104
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	5.27	79		72--109
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	2.73	41	*	61--104
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	5.69	85		60--160
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	2.01	30		10--77
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	3.17	48		27--130
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	3.25	49		20--137
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	4.7	71		59--107
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	6.89	103		72--131

King County Environmental Lab Analytical QC Report

MSD:WG97804-4 MS:WG97804-3 L46069-1 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: 421240C

(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	4.87	73		41--157	6.67	6.5	98		29		35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	5.32	80		59--125	6.67	6.94	104		26		35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	4.92	74		50--144	6.67	6.24	94		24		35
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	4.63	69		61--119	6.67	5.88	88		24		35
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.61	69		59--111	6.67	5.96	89		25		35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.73	71		60--119	6.67	5.96	89		23		35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.8	57		54--126	6.67	5.16	77		30		35
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	5.2	78		60--139	6.67	6.72	101		26		35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	4.95	74		64--113	6.67	6.5	98		28		35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	4.3	65		36--146	6.67	5.53	83		24		35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	3.36	50		46--113	6.67	4.85	73		37	*	35
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	5.37	80		62--166	6.67	7.1	107		29		35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	1.2	18		10--66	6.67	1.3	20		11		35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	4.72	71		61--135	6.67	5.96	89		23		35
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	5.07	76		52--157	6.67	6.52	98		25		35
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	4.86	73		61--118	6.67	6.35	95		26		35
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	6.1	92		53--129	6.67	7.82	117		24		35

SRM:WG97804-5 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE

(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
4,4'-DDT	5.3	10.7	ug/Kg	119	154	129		10--200
Alpha-Chlordane	2.7	5.33	ug/Kg	16.5	16.9	102		48--144

LD:WG97804-6 L46069-3 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	<MDL			35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	<MDL			35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	<MDL			35
Aldrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Dieldrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	<MDL			35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	<MDL			35

King County Environmental Lab Analytical QC Report

Gamma-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			35								
Heptachlor	0.33	0.667	ug/Kg	<MDL	<MDL			35								
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	<MDL			35								
Methoxychlor	3.3	6.67	ug/Kg	<MDL	<MDL			35								
Toxaphene	6.7	13.3	ug/Kg	<MDL	<MDL			35								
Surrogate:	**2,4,5,6-Tetra chloro m xylene**	**Decachl oro biphenyl**														
(Lab Limits)	**30--134**	**15--155**														
L46069-1	75	80														
L46069-2	78	80														
L46069-3	78	91														
L46069-4	80	83														
L46069-5	76	84														
L46069-6	83	96														
L46069-7	63	84														
L46069-8	86	95														
L46069-9	78	95														
L46094-1	72	82														
L46094-2	80	84														
L46094-3	93	98														
L46094-4	81	97														
L46094-5	81	96														
L46094-7	64	87														
L46094-8	87	102														
L46094-9	81	84														
L46094-10	68	85														
L46094-11	91	96														
L46094-16	78	87														
WG97804-1	45	99														
WG97804-2	41	107														
WG97804-3	64	84														
WG97804-4	88	123														
WG97804-5	90	87														
WG97804-6	91	98														

King County Environmental Lab Analytical QC Report

Workgroup: WG97964 (PPLLS#76) Run ID: R129190

MB:WG97964-1 Matrix: OTHR SOLID Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	
Aldrin	0.67	1.33	ug/Kg	<MDL	
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	
Beta-BHC	0.33	0.667	ug/Kg	<MDL	
Delta-BHC	0.33	0.667	ug/Kg	<MDL	
Dieldrin	0.67	1.33	ug/Kg	<MDL	
Endosulfan I	0.67	1.33	ug/Kg	<MDL	
Endosulfan II	0.67	1.33	ug/Kg	<MDL	
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	
Endrin	0.67	1.33	ug/Kg	<MDL	
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	
Gamma-Chlordane	0.33	0.667	ug/Kg	<MDL	
Heptachlor	0.33	0.667	ug/Kg	<MDL	
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	
Methoxychlor	3.3	6.67	ug/Kg	<MDL	
Toxaphene	6.7	13.3	ug/Kg	<MDL	

SB:WG97964-2 MB:WG97964-1 Matrix: OTHR SOLID Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	6.64	100		78--121
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	6.55	98		75--111
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	6.46	97		57--145
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	5.43	81		28--113
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	5.75	86		20--99
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	6.07	91		66--102
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	5.87	88		63--108
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	6.68	100		58--139
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	6.19	93		62--104
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	5.97	90		72--109
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	5.29	79		61--104
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	7.1	106		60--160
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	1.52	23		10--77
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	5.92	89		27--130
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	5.83	88		20--137
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	6.19	93		59--107
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	7.52	113		72--131

King County Environmental Lab Analytical QC Report

MSD:WG97964-4 MS:WG97964-3 L46094-12 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	Samp Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	4.98	75		41--157	6.67	5.27	79		5		35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	5.41	81		59--125	6.67	5.44	82		1		35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	4.97	75		50--144	6.67	4.32	65		14		35
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	4.85	73		61--119	6.67	4.66	70		4		35
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	5.29	79		59--111	6.67	5.14	77		3		35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.88	73		60--119	6.67	4.83	72		1		35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.66	70		54--126	6.67	2.83	42	*	50	*	35
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	5.33	80		60--139	6.67	5.18	78		3		35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	4.9	74		64--113	6.67	4.81	72		3		35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	4.39	66		36--146	6.67	4.51	68		3		35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	4.32	65		46--113	6.67	3.36	50		26		35
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	5.45	82		62--166	6.67	5.49	82		0		35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	2.57	39		10--66	6.67	2.85	43		10		35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	5.07	76		61--135	6.67	4.83	72		5		35
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	5.21	78		52--157	6.67	5.1	77		1		35
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	4.64	70		61--118	6.67	4.9	74		6		35
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	5.6	84		53--129	6.67	5.3	79		6		35

SRM:WG97964-5 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
4,4'-DDT	5.3	10.7	ug/Kg	119	159	134		10--200
Alpha-Chlordane	2.7	5.33	ug/Kg	16.5	20.2	122		48--144

LD:WG97964-6 L46094-25 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	<MDL			35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	<MDL			35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	<MDL			35
Aldrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Dieldrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	<MDL			35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	<MDL			35

King County Environmental Lab Analytical QC Report

Gamma-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			35								
Heptachlor	0.33	0.667	ug/Kg	<MDL	<MDL			35								
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	<MDL			35								
Methoxychlor	3.3	6.67	ug/Kg	<MDL	<MDL			35								
Toxaphene	6.7	13.3	ug/Kg	<MDL	<MDL			35								
Surrogate:	**2,4,5,6-Tetra chloro m xylene**	**Decachl oro biphenyl**														
(Lab Limits)	**30--134**	**15--155**														
L46094-12	88	60														
L46094-13	85	60														
L46094-14	92	62														
L46094-15	83	55														
L46094-17	81	64														
L46094-18	93	68														
L46094-19	89	60														
L46094-20	87	56														
L46094-21	103	64														
L46094-22	96	59														
L46094-23	85	58														
L46094-24	103	66														
L46094-25	81	66														
L46094-26	68	55														
L46094-27	99	65														
L46094-28	98	60														
L46094-29	102	67														
WG97964-1	81	93														
WG97964-2	92	104														
WG97964-3	90	75														
WG97964-4	90	77														
WG97964-5	104	98														
WG97964-6	85	70														

King County Environmental Lab Analytical QC Report

Workgroup: WG97781 (WTPH-DS#248) Run ID: R131353

MB:WG97781-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: NONE
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	

SB:WG97781-2 MB:WG97781-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	150	170	113		50--150

SB:WG97781-3 MB:WG97781-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	150	151	101		50--150

LD:WG97781-4 L46069-1 Matrix: FRSHWTRSED Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	56.3	40.7	32		35

LD:WG97781-5 L46094-1 Matrix: FRSHWTRSED Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	32.7	30.6	7		35

Surrogate:	2-Fluoro biphenyl	Penta cosane
(Lab Limits)	50--150	50--150
L46069-1	109	124
L46069-2	114	195 *
L46069-3	113	137
L46069-4	110	134
L46069-5	107	120
L46069-6	111	113
L46069-7	109	115
L46069-8	107	123
L46069-9	106	157 *
L46094-1	102	118
L46094-2	106	115

King County Environmental Lab Analytical QC Report

L46094-3	113	113														
L46094-4	108	114														
L46094-5	107	119														
L46094-7	109	118														
L46094-8	109	131														
L46094-9	113	131														
L46094-10	109	116														
L46094-11	111	123														
L46094-16	114	263 *														
WG97781-1	109	97														
WG97781-2	110	103														
WG97781-3	121	96														
WG97781-4	107	108														
WG97781-5	106	111														

King County Environmental Lab Analytical QC Report

Workgroup: WG97910 (WTPH-DS#250) Run ID: R128564

MB:WG97910-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: NONE

(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	

SB:WG97910-2 MB:WG97910-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	150	174	116		50--150

SB:WG97910-3 MB:WG97910-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: NONE

(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	150	161	108		50--150

LD:WG97910-4 L46094-17 Matrix: FRSHWTRSED Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	54.5	59.6	9		35
Lube Oil Range (>C24)	25	25	mg/Kg	38.9	36.7	6		35

LD:WG97910-5 L46094-29 Matrix: FRSHWTRSED Listtype: ORWTPH-DX Method: WDOE NWTPH-DX (7-3-06-001) Project: 421240C

(Lab Duplicate)

Parameter	MDL	RDL	Units	Samp Value	LD Value	RPD^	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	83.9	100	18		35

Surrogate:	2-Fluoro biphenyl	Penta cosane
(Lab Limits)	50--150	50--150
L46094-12	106	135
L46094-13	110	144
L46094-14	105	124
L46094-15	106	184 *
L46094-17	110	133
L46094-18	107	115
L46094-19	118	150
L46094-20	110	143
L46094-21	113	152 *
L46094-22	110	120

King County Environmental Lab Analytical QC Report

L46094-23	115	176 *														
L46094-24	111	123														
L46094-25	114	138														
L46094-26	113	140														
L46094-27	115	131														
L46094-28	117	162 *														
L46094-29	117	147														
WG97910-1	109	101														
WG97910-2	110	107														
WG97910-3	131	107														
WG97910-4	110	129														
WG97910-5	115	150														

KING COUNTY ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REVIEW

for

2009 Stream Sediment Monitoring Program

Prepared by:

Colin Elliott 7/20/2010

Colin Elliott
Laboratory Project Manager

Reviewed by:

__Unit Supervisors_____

July 20, 2010

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INTRODUCTION

This quality assurance (QA) narrative is intended to document the QA review conducted on the chemistry analyses performed for the 2009 Stream Sediment Monitoring program. The QA narrative is organized into the five sections listed below.

- General Comments
- Sample Collection
- Conventional Analyses
- Metal Chemistry
- Organic Chemistry

An overview of the approach used for the QA review is detailed in the *General Comments* section. This review is a comparison of the requirements and specifications in the Sampling and Analysis Plan (SAP) and the actual sample collection and analysis that was performed. Additional information specific to each analysis is included in the appropriate analytical section.

This QA review and narrative (specifically defined as QA1) have been conducted in accordance with guidelines established through the Puget Sound Dredged Disposal Analysis (PSDDA) program, Sediment Management Standards (WAC 173-204-610) and the Sediment Sampling and Analysis Appendix (SAPA), WDOE 2008.

GENERAL COMMENTS

Scope of Samples Submitted

This QA review is associated with freshwater sediment samples collected August 10 and August 12, 2009 as part of the 2009 Stream Sediment Monitoring program. The Stream Sediment Monitoring Sampling and Analysis Plan (SAP), draft version from June 2008, generally defines the criteria used in this review.

All analyses have been conducted by the King County Environmental Laboratory (KCEL). Sediment analytical data are reported with associated data qualifiers and have undergone QA1 review, as summarized in this narrative report.

Completeness

Completeness has been evaluated for this data submission and QA review by considering the following criteria:

- Comparing reported data to the planned project analyses summarized in Table 1.
- Compliance with storage conditions and holding times.
- Frequency of analysis of the complete set of quality control (QC) samples outlined in Table 2.

Methods

Analytical methods are noted in the applicable analytical sections of this QA review.

Target Lists

The reported target lists have been compared to the target analytes listed in *Development of Freshwater Sediment Quality Values for Use in Washington State, Phase II Report (*Ecology, 2003) and may also be compared to *Table 3 - Puget Sound Marine Sediment Cleanup Screening Levels Chemical Criteria* contained in Chapter 173-204 WAC.

In 2009, no samples were tested for Fecal Coliforms.

Detection Limits

As part of the QA1 review, the detection limits reported for each parameter have been reviewed against the detection limit requirements defined in the SAP. Unfortunately, the 2008 draft SAP was not updated to reflect current organics detection limits available at the time the samples were analyzed. When sample results have been reported as less than the Method Detection Limit (<MDL) and the associated detection limits are higher than those defined in the SAP, the particular samples and parameters have been identified and the circumstances explained. These summaries are included with each analytical section of this QA review.

The KC Laboratory reports include both the reporting detection limit (RDL) and the method detection limit (MDL) for each sample and parameter, where applicable. The RDL is defined as *the minimum concentration of a chemical constituent that can be reliably quantified while t*he MDL is defined as *the minimum concentration of a chemical constituent that can be detected.* For some methods the detection limits reported may vary from sample to sample depending on the amount of sample analyzed and any additional dilutions required.

Storage Conditions and Holding Times

Storage conditions and holding times have been evaluated using guidelines defined in the project SAP. Preparation and analysis holding times for each method are summarized in each analytical section.

Method Blanks

Method blank results have been used to evaluate the possible laboratory contamination of samples. Method blank results have been reviewed for the presence of analytes detected at or greater than the MDL. For analytes where the method blank response was at or above the MDL associated sample results may be qualified with a B, B2 or B3 flag, depending on the concentration in the sample compared to the method blank.

Standard Reference Materials and Lab Control Samples

Standard reference material (SRM) and lab control sample (LCS) recoveries have been used to evaluate possible low or high analytical bias on a batch-specific basis. LCS and SRM analysis is included with selected organic, metals and conventional parameters (see Table 2). Sample results may be qualified if the LCS or SRM recoveries indicate a potential bias in the associated batch of samples.

Matrix Spikes

Matrix spike recoveries have been used to evaluate possible low or high analytical bias on a matrix and batch-specific basis. Matrix spikes are analyzed with metals, organics and selected conventionals parameters (see Table 2). All associated sample results may be qualified if the MS recoveries indicate a potential bias with all samples in the batch but it is more typical that only the sample used as the spike will be qualified.

For Metals only, matrix spike recovery results are used to qualify sample data only when the sample levels in the spiked sample are less than 4 times the spiked concentration. High sample levels relative to the spiked concentration can compromise the measurement of accurate spike recoveries.

Laboratory Replicate Samples

Replicate analysis (laboratory duplicates or triplicates) is used as an indicator of method precision and is used to qualify data on an analyte and batch-specific basis. Not all replicate data are used, however, as an indicator for data qualification. Only sets of replicate results which include at least one result greater than the RDL are considered for data qualification. These guidelines have been used to account for the fact that precision obtained near the detection limit is not representative of precision obtained throughout the entire analytical range. The precision of lab replicates is used to qualify data only when it is clear that the excessive variability has influenced the associated sample results. Duplicate matrix spikes are also used for selected methods where analyte levels are not routinely above the RDL. The precision of duplicate matrix spikes is used to qualify data only when it is clear that the variability may have influenced the sample result.

Surrogates

Surrogates are only analyzed for organic parameters. Surrogate recoveries have been used to evaluate possible low or high analytical bias on a sample-specific basis. Individual sample results are flagged only if unacceptable recoveries indicate the sample results are biased.

Data Qualifiers

The data qualification guidelines described above has been summarized in Table 3. This table conforms to the guidelines in the current SAPA (2008).

Units and Significant Figures

Units and the reporting basis vary, depending on the parameter and are explained in the analytical sections below. Data generally have been reported to three significant figures if above the RDL and two significant figures if equal to or below the RDL.

SAMPLE COLLECTION

This section describes sampling activities associated with the 18 freshwater sediment samples collected August 10 and 12, 2009. Sampling activities were conducted following general guidance suggested in the Puget Sound Protocols (PSEP, 1996 and 1998), and in the SAP.

Sampling Locations and Station Positioning

Sampling locations (stations) were selected and the prescribed coordinates determined prior to field activities. Stations were selected in order to characterize and evaluate the potential effect(s) of point and non-point sources on freshwater sediment quality in selected WRIA 8 and WRIA 9 stream basins. A number of these stations are part of King County's long-term ongoing monitoring program; other stations were newly created in 2009. The prescribed coordinates for these stations are presented in the following table. All station coordinates are recorded in state plane coordinate system North American Datum 1983 (NAD83).

Lab ID #	Station Name	Station Description	Prescribed Northing (y-plan)	Prescribed Easting (x-plan)
L48633-1	0478	Little Bear Cr.- mouth at bike trail	278818	1312537
L48633-2	A434	Thornton Creek mouth- last footbridge in park	256883	1285033
L48633-3	00631	Issaquah Creek mouth- last footbridge in park	206430	1336885
L48633-4	0432	McAleer Creek, 16750 Shore Drive Sheridan Beach	277057.2	1284888
L48633-5	0474	North Creek, upstream side of bike trail bridge	278813	1307015
L48633-6	0322	NEWAUKUM Creek//USGS gauging station on N left bank downstream from bridge on 219TH SE	102390.5	1336841
L48633-7	A320	Big Soos Creek, USGS gauge station 12112600, 0.25 mile upstream of hatchery	116821.3	1309972
L48633-8	0317	Springbrook Creek, bridge at north end of Longacres	173079.2	1294315
L48633-9	A315	Hill (Mill) Creek, bridge at 68th and S. 261st	137217.7	1289725
L48629-1	X322	Newaukum Creek near mouth at 358th St. SE	105523	1334258
L48629-2	BB322	Newaukum Creek at 392th St. SE (routine benthos site)	93565	1341445
L48629-3	E322	Newaukum Creek at 400th St. SE Bridge	90871	1340907
L48629-4	F322	Newaukum Creek at 416th St SE Bridge	85546	1342797
L48629-5	FF322	Newaukum Creek at 424th St SE Bridge	82948	1342468
L48629-6	AD322	Newaukum Creek at Mahler Park, off 244th Ave SE	79610	1346405
L48629-7	AE322	Newaukum Creek at 248th Ave SE	80264	1347765
L48629-8	G322	Newaukum Creek at 424th St SE Bridge	82823	1351043
L48629-9	QQ322	Newaukum Creek near Quarry on 416th St SE	85390	1357235
L48629-10	P322	Newaukum Creek off of 292nd Ave SE. Not collected due to unsafe access	85557	1361792

Sediment grab samples were collected by wading into the stream. Core samples were collected within the width and reach of each station such that representative depositional material was obtained. This is consistent with the specifications in the SAP.

Sample Description Table

Lab Sample #	Locator	Sample Collection	Sediment Depth (from surface, cm)	Sample Usage
L48633-1	0478	Surface Grabs	5	Chemistry
L48633-2	A434	Surface Grabs	5	Chemistry
L48633-3	00631	Surface Grabs	5	Chemistry
L48633-4	0432	Surface Grabs	5	Chemistry

L48633-5	0474	Surface Grabs	5	Chemistry
L48633-6	0322	Surface Grabs	5	Chemistry
L48633-7	A320	Surface Grabs	5	Chemistry
L48633-8	0317	Surface Grabs	5	Chemistry
L48633-9	A315	Surface Grabs	5	Chemistry
L48629-1	X322	Surface Grabs	5	Chemistry
L48629-2	BB322	Surface Grabs	5	Chemistry
L48629-3	E322	Surface Grabs	5	Chemistry
L48629-4	F322	Surface Grabs	5	Chemistry
L48629-5	FF322	Surface Grabs	5	Chemistry
L48629-6	AD322	Surface Grabs	5	Chemistry
L48629-7	AE322	Surface Grabs	5	Chemistry
L48629-8	G322	Surface Grabs	5	Chemistry
L48629-9	QQ322	Surface Grabs	5	Chemistry

Sample Collection

Sediment was collected at each station using precleaned PVC core tubes or stainless steel spoons. Cored samples were collected from shallow water (<3 ft) by pushing the core tubes into the sediment to a depth of 5 cm. A stainless steel spatula or gloved hand was inserted under the tube mouth to trap the sediment inside as the tube was removed from the stream. Tubes may have been slightly angled to allow drainage of excess water, but fines were not allowed to escape. Sediment in the tube was then transferred to a clean, stainless steel compositing container. Several separate cores may have been collected in order to acquire sufficient sample volume to perform all chemistry analyses. A spoon was used at a number of locations with very thin sediment layers or if the core tubes would not easily penetrate to 5 cm. Sediment was scooped up as efficiently as possible with the spoons and transferred to a stainless steel bucket for compositing.

Sample Handling

For cored samples, the entire contents of all core tubes collected at a given site were emptied directly into a stainless steel bucket. If excess water was present, it was decanted once the fines had been allowed to settle. A stainless steel spoon or spatula was then used to homogenize the sample by stirring. Rocks or other debris one half-inch or larger in diameter were removed and discarded. For spooned samples, the contents of as many spoons of material as needed were emptied directly into a stainless steel bowl. Excess water if present was decanted once the fines had been allowed to settle. The spoon was then used to homogenize the sample by stirring. Any rocks or other debris one half-inch or larger in diameter were removed and discarded. For AVS, an undisturbed portion of sediment was placed in a sample jar.
Aliquots of the homogenized sediment were subsampled into individual, pre-labeled containers for chemistry testing except as noted above. Chemical preservative, if needed, was added. Sample containers were supplied by the King County Environmental Laboratory and were pre-cleaned according to analytical specifications.

Decontamination

Dedicated sets of core tubes, spoons and other homogenizing/subsampling equipment were dedicated to each station, precluding the need for decontamination in the field.

Sample Storage and Preservation

Samples were stored in ice-filled coolers from the time of collection until delivery to the King County Environmental Laboratory. Samples were delivered under chain-of-custody and maintained as such throughout the analytical process. Samples were stored frozen (-18°C) by the laboratory until analysis with the exception of samples for particle size distribution (PSD) analysis and acid volatile sulfide. Sample aliquots for these analyses were stored refrigerated at approximately 4°C. A more complete description of sample handling and storage can be found in each analytical chemistry section of this narrative.

Copies of chain-of-custody forms and field notes are included as an appendix to this QA review narrative.

CONVENTIONAL ANALYSES

Completeness
Conventional data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Subcontracted Analyses
All analyses were performed at the King County Environmental Laboratory.

Methods
Acid volatile sulfide analyses were performed in accordance with EPA *Methods for Chemical Analysis of Water and Wastes*, 1991.
Ammonia analysis was performed using the fluorescence method (KEROUEL & AMINOT 1997) following a KCl extraction (Plumb, 1981).
pH analyses were performed in accordance with SW846 9045C.
PSD analysis was performed in accordance with ASTM D422.
TOC analysis was performed in accordance with SM5310-B and EPA 9060.
Ortho-phosphate phosphorus analyses were performed in accordance with SM4500-P-F following an Olsen extraction.
Total solids analyses were performed in accordance with SM2540-G.

Detection Limits
The method detection limits (MDLs) reported for conventionals parameters are within the requirements defined in the SAP with the following exceptions.

For ammonia, ortho-phosphate phosphorus and TOC, reported MDLs and RDLs were higher than SAP requirements for most samples. All samples that had higher detection limits had reportable levels of these parameters thus the project goals were not compromised.

For PSD analysis, most samples have MDLs above the SAP values for Clay but no detectable levels. It is not expected that this has compromised the project goals since the other three PSD parameters (sand, gravel and silt) for all but 2 samples had reportable levels.

Reporting Requirements (significant figures, units, basis and qualifiers)
For analyses performed at the KC Laboratory, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied. This may not apply to subcontracted data.

In the attached Comprehensive Report, conventionals parameters are reported in mg/Kg, dry weight basis, for TOC, ammonia, ortho-phosphate phosphorus and AVS. Particle Size Distribution (PSD) and Total Solids are reported in percent, wet weight basis. For all parameters, the MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. Any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times
Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for conventional analyses are listed in the table below.

Parameter	Lab ID#	Collect Date	Preparation Date	Analysis Date	Holding Time*	Holding Time**
Ammonia	All	10, 12-Aug-09	20-Oct-09	26-Oct-09	6 Months at -18°C	14 days at -18°C
Particle Size Distribution	All	10, 12-Aug-09	28-Sep thru 26-Oct-09	29-Sep thru 29-Oct-09	6 Months at 4°C	NA
Total Organic Carbon (TOC)	All	10, 12-Aug-09	31-Aug-09	02-Dec thru, 04-Dec 09	6 Months at -18°C	6 Months at -18°C
Orthophosphate Phosphorous	All	10, 12-Aug-09	06-Aug-09	06-Aug-09	6 Months at -18°C	14 days at -18°C
Total Solids	All	10, 12-Aug-09	31-Aug-09	01-Sep-09	6 Months at -18°C	NA
pH	L48629-1 thru -9 and L48633-6, -7	10-Aug-09	11-Aug-09	11-Aug-09	1 day at 4°C	NA
	L48633-1 thru -5, -8, -9	12-Aug-09	13-Aug-09	13-Aug-09		
Acid Volatile Sulfide (AVS)	L48629-1 thru -6	10-Aug-09	19-Aug-09	19-Aug-09	14 days at 4°C	7 days at 4°C
	L48629-7 thru -9 and L48633-6	10-Aug-09	20-Aug-09	20-Aug-09		

* = Holding time from collection to preparation.
** = Holding time from preparation to analysis.

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks

Method blanks were analyzed in connection with ammonia nitrogen, orthophosphate phosphorus, total solids, total organic carbon and acid volatile sulfide analyses. All method blank results were less than the MDL.

Standard Reference Material and/or Laboratory Control Sample (LCS)

An SRM was analyzed in connection with TOC and LCS samples were analyzed for Ammonia, nitrogen and Orthophosphate Phosphorous the frequency noted in Table 2. All percent recoveries were within the acceptance limits.

Matrix Spikes

Matrix spikes (MS) were analyzed in conjunction with ammonia nitrogen, orthophosphate phosphorus, TOC and AVS at the frequency noted in Table 2. All matrix spike percent recoveries were within the acceptance limits listed in the SAP, except for the following:
The AVS matrix spike recovery was outside the control limit of 65 – 135% for spiked sample L48629-3, with a measured recovery of 52%. The spike blank recovery associated with this matrix spike was within the control limit of 80 – 120% recovery. AVS matrix spike recoveries for freshwater sediments are routinely below the lower acceptance limit while spike blank recoveries are acceptable; therefore, the low MS recovery is assumed to be due to matrix interference. All sample results for AVS have been qualified with a JG flag to indicate that a low bias likely exists. The extent of the bias is uncertain.

Laboratory Replicate Samples

A set of laboratory triplicates was analyzed for each of the conventional parameters at the frequency noted in Table 2. The percent relative standard deviation (%RSD) for each triplicate set was less than or equal to the 20% acceptance limit for all parameters.

Additional QA Issues

Each PSD sample is checked for accuracy by summing the phi sizes to verify that the results are 100% +/- 10%. For Sample L48629-4, the sum of the PSD values was 113% which is greater than 110%. The sample was re-analyzed and showed similar results compared to the initial analysis. All PSD data for L48629-4 have been qualified with the J flag.

METALS CHEMISTRY

Completeness

Metals data are reported for all samples listed in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Methods

SEM extracts were prepared by the Conventionals unit of the KCEL using the EPA method for AVS (1991). These extracts were analyzed by EPA methods 245.1 rev 3 (CVAA Mercury) and 200.7 (ICP metals). Total recoverable metals were analyzed in accordance with EPA method 6020A (ICPMS metals) and EPA method 7471B (CVAA Mercury).

Target List

The reported target list includes the following for total recoverable metals: silver, arsenic, cadmium, chromium, copper, nickel, lead, phosphorus, zinc and mercury. The reported target list for SEM includes: silver, arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury.

Detection Limits

The method detection limits (MDLs) reported for Metals parameters are within the requirements defined in the draft SAP or detectable levels were reported for all samples, except for the following, discussed in wet weight:

- For Sample L48633-1, the Total Phosphorus MDL was 240 mg/Kg compared to the draft SAP MDL of 2.5 mg/Kg. No Total Phosphorus was detected in the sample. The higher MDL was the result of additional dilution required to eliminate internal standard interference.
- For Sample L48629-8, the Extractable Silver MDL was 0.4 mg/Kg compared to the draft SAP MDL of 0.08 mg/Kg. No Extractable Silver was detected in the sample. The higher MDL was the result of additional dilution required to eliminate matrix interference. Additionally, no Extractable Silver was detected in any of the other samples, despite the lower MDL of 0.08 mg/Kg.

Reporting Requirements (significant figures, units, basis and qualifiers)

For analyses performed at the KCEL, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied.

In the Comprehensive Report attached, Metals parameters are reported in mg/Kg, dry weight basis, for all elements. The MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. For any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times

Sample storage conditions and holding times have been evaluated using guidelines established during the SAP. The dates and holding time criteria for the actual storage conditions used for metals analyses are listed in the tables below.

Total Metals

Parameter	Lab ID#	Date Collected	Date Digested	Date Analyzed	Sample Holding Time	Digestate/Extract Holding Time
Total metals by ICPMS [a]	All	10, 12-Aug-09	27-Oct-09	02, 04-Nov-09	2 years at -18°C	6 months at 20°C
Total Hg by CVAA	All	10, 12-Aug-09	31-Aug-09	31-Aug-09	28 days at -18°C	NA

[a] Total Metals by ICPMS include Ag, As, Cd, Cr, Cu, Ni, P, Pb, Zn

Simultaneously Extractable Metals (SEM)

Parameter	Lab ID#	Date	Date	Date	Sample	Digestate/Extract

		Collected	AVS/SEM Extracted	Analyzed	Holding Time	Holding Time
SEM by ICP[a]	L48629-1 thru -6	10-Aug-09	19-Aug-09	24-Aug-09	14 days at 4°C	14 days at 20°C
	L48629-7 thru -9 and L48633-6	10-Aug-09	20-Aug-09			
SEM Hg by CVAA	L48629-1 thru -6	10-Aug-09	19-Aug-09	25-Aug-09	14 days at 4°C	14 days at 20°C
	L48629-7 thru -9 and L48633-6	10-Aug-09	20-Aug-09			

[a] SEM by ICP include Ag, As, Cd, Cr, Cu, Ni, Pb, Zn
Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks
All method blanks were less than the MDL.

Laboratory Control Samples
For total metals, multiple LCS samples were run in order to cover as many reported elements as possible (no LCS is available for phosphorus). Three LCS' were analyzed in association with total recoverable metals included in this data submission. All LCS recoveries were within the defined QC limits for total metals analyses.

No sediment LCS or Standard Reference Material (SRM) is available for the SEM procedure. Spike blanks were run to evaluate the performance of the ICP and CVAA analyses of the extracts. All spike blank recoveries were within acceptance limits.

Matrix Spikes
Matrix spike percent recoveries were within the 75% - 125% QC limits for all total metals and SEM analyses, with the following exception.

Spiked Sample ID	Parameter	Matrix Spike Recovery	Sample Flag
L49629-7	Total Chromium	25	J

The unacceptable recoveries are likely due to variability of the sample background levels of Chromium relative to the spike level. Post digestion spikes for this element into the background sample and lab duplicate show acceptable recovery, indicating that the sample matrix was not influencing the spike recoveries. The parameter results for Total Chromium for Sample L48629-7 and the matrix spike have been qualified with a J flag to indicate the reported values should be treated as estimates.

Matrix Spike Duplicate Samples
Matrix spike duplicate (MSD) samples were analyzed for total mercury only. All matrix spike duplicate (MSD) recoveries were within the 75% - 125% QC limit for total mercury analyses.
The relative percent differences (RPDs) for the MSD results were less than or equal to the QC limit of 20%.

Laboratory Replicate Samples
The relative percent differences (RPDs) for laboratory duplicate (LD) results for all total metals and SEM were less than or equal to the QC limit of 20% with one exception. The RPD value for Total Chromium for sample L48629-7 was outside the 20% limit at 32%. A J flag has been applied to the Total Chromium value for the sample and the lab duplicate to indicate the reported values should be treated as estimates. No other sample data has been flagged since it is unknown if the heterogeneity applies to other samples.

ORGANIC CHEMISTRY

Completeness

Organics data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Methods

BNAs and selected EDCs (bis(2-ethylhexyl)adipate, bisphenol A, total 4-nonylphenol) were extracted and analyzed in accordance with EPA methods 3550B and 8270D. The hormonal ECDs were analyzed by the Ternes Method (2002). Polybrominated Diphenyl Ethers (PBDE) were analyzed in accordance with EPA Method 1614 modified with GC/ICPMS detection. PCB and chlorinated pesticides analysis was performed in accordance with EPA methods 8082 and 8081A. WTPH-Dx analysis was conducted according to Ecology method NWTPH-DX.

Target List

The reported BNA target list includes all compounds specified in *Table 1 - Marine Sediment Quality Standards Chemical Criteria* and *Table 3 - Puget Sound Marine Sediment Cleanup Screening Levels Chemical Criteria* contained in Chapter 173-204 WAC with the exception of benzo(j)fluoranthene. The KC Laboratory has verified that analytical conditions are sufficient to calculate a total benzofluoranthene result using the reported *b* and *k* isomers.

The reported EDC target lists includes bis(2-ethylhexyl)adipate, bisphenol A, total 4-nonylphenol, estrone, estradiol and ethynyl estradiol.

Reported PCB data include Aroclors 1016, 1221, 1232, 1242, 1248, 1254 and 1260.

Detection Limits, Units and Significant Figures

The detection limits (MDLs) for Organics parameters listed in either version of the SAP (original - 2004 or the draft - 2008) do not necessarily reflect the method performance available at the time these samples were analyzed. Wet weight detection limits routinely reported for these analyses are included in the appendices of this narrative. Only 2 parameters (Aniline and 2,4-Dinitrotoluene) showed MDL and RDL values higher than the detection limits routinely reported for these parameters. For all other organics parameters, the reported MDLs and RDLs met or were lower than the detection limits routinely reported.

The original SAP (2004) defines TOC-normalized MDL requirements for Non-ionizable Organic parameters, based on a nominal dry-weight TOC concentration of 5,000 mg/Kg, or 0.5%. All samples analyzed had dry-weight TOC values above 5,000 mg/Kg and thus could be compared to the listed TOC-normalized MDLs. All MDLs for the Non-ionizable Organic parameters were below the associated SMS criteria. This allows comparison of sample results to SMS levels without the problem of detection limits higher than the SMS levels.

Reporting Requirements (significant figures, units, basis and qualifiers)

For analyses performed at the KC Laboratory, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied.

In the Comprehensive Report attached, Organics parameters are reported on a dry weight basis. For all parameters, the MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. Any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times

Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for organics analyses are listed in the table below.

Parameter	Lab ID#	Date Collected	Date Extracted	Date Analyzed	Sample Holding Time	Extract Holding Time
BNAs	All	10, 12-Aug-09	29-Oct-2009	19 thru 20-Nov-2009	1 years at -18°C	40 days at 4°C
Hormonal EDCs	All	10, 12-Aug-09	09-Sep-2009	01 thru 02-Oct-2009	1 years at -18°C	40 days at 4°C
PBDEs	All	10, 12-Aug-09	19-Aug-2009	25 thru 26-Sep-2009	1 years at -18°C	40 days at 4°C
Pesticides	All	10, 12-Aug-09	19-Aug-2009	17 thru 18-Sep-2009	1 years at -18°C	40 days at 4°C
PCBs	All	10, 12-Aug-09	30-Sep-2009	22 thru 23-Oct-2009	1 years at -18°C	40 days at 4°C
WTPH-Dx	All	10, 12-Aug-09	17-Aug-2009	18 thru 19-Sep-2009	14 days at 4°C	40 days at 4°C

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks

Method blanks were analyzed for all Organics parameters and all method blank results were less than the MDL, except as noted below:

1. BNAs

The method blank analyzed with BNAs had a result above the MDL for Bis(2-ethylhexyl) Phthalate at 26.2 ug/Kg and Di-N-Butyl Phthalate at 4 ug/Kg. All samples have a sample to method blank ratio, on a wet-weight basis, of 5 or less have been qualified with a “B” flag and should be considered significantly biased by lab contamination, except for Samples L48633-2 and L48633-8. These 2 samples had a ratio >10 for Bis(2-ethylhexyl) Phthalate and therefore have no flag added for that parameter and can be considered unbiased by lab contamination.

2. PBDEs

The method blank analyzed with the PBDEs had a result above the MDL for PentaBDE-99 at 0.007 ug/Kg and TetraBDE-47 at 0.0089 ug/Kg. Samples where the sample to method blank ratio is 5 or less, on a wet-weight basis, have been qualified with a “B” flag. Samples with ratios above 5 but </= 10, on a wet-weight basis, have been qualified with a “B3” flag. Sample results qualified with the B or B3 flag should be treated as estimated values. Samples where the ratio is >10 or where the results were <MDL have no flag added and can be considered unbiased by lab contamination.

Surrogate Recoveries

Surrogate recovery acceptance limits for sediment samples have been developed based on historical lab performance using the current analytical methods. The exception to this is Method NWTPH-Dx where method-defined surrogate acceptance limits are applied.

1. BNAs

For BNA sample data, surrogate recoveries may be evaluated separately for the acid and base/neutral fractions. Within each fraction, 2 or more surrogates must be outside the acceptance limits in order to qualify the associated sample data. No BNA sample had more than 1 surrogate outside the acceptance limits for each fraction.

2. PCBs

Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

3. Chlorinated Pesticides

Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

4. WTPH-Dx
All surrogate recoveries were within the method-specific acceptance limits for 2-fluorobiphenyl for all samples in this data submission. Recovery of pentacosane from Samples L48633-2 and -9 exceeded the upper control limit. The associated WTPH-Dx sample results were not qualified since the high recovery is likely due to interference from background pentacosane or a similar coeluting compound. This type of interference does not necessarily indicate a positive bias to the WTPH-Dx results.

5. EDC
Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission except for Samples L48629-4 and -5. The recoveries for D4-4-Nonyl Phenol were slightly above the 150% upper limit at 155% and 161%, respectively. The results for the associated samples were either <MDL or just above the MDL so it is unlikely the reported results were significantly biased.

Standard Reference Material (SRM) and/or Laboratory Control Sample (LCS)
SRMs are available only for selected parameters for the BNAs, Chlorinated Pesticides and PCBs. Acceptance limits for the certified parameters reported in this data set have been developed using historical lab data. SRM recoveries outside these lab-defined limits indicate the method has not performed as expected and the associated sample data may be qualified.
An LCS is available for 11 of the individual PBDE parameters reported. Acceptance limits are 80% to 120% for each.

1. BNAs
The sediment SRM analyzed in association with the reported BNA results is 1944, certified by the National Institute of Standards and Technology (NIST). The certified organics parameters in SRM 1944 are only a partial list of all the BNA compounds reported in this analysis. All measured recoveries for this SRM were within acceptance limits.

2. Chlorinated Pesticides
The sediment SRM analyzed in association with the reported Chlorinated Pesticides results is 1944, certified by the NIST. SRM 1944 contains certified levels of 4,4'-DDT and alpha-Chlordane. All measured recoveries for this SRM were within acceptance limits.

3. PCBs
The sediment SRM analyzed in association with the reported PCB results is HS2, certified by the National Research Council of Canada. SRM HS2 contains Aroclor 1254. All measured recoveries for this SRM were within acceptance limits.

4. PBDEs
The LCS analyzed with the PBDE samples has certified values for 11 of the 14 parameters analyzed by this method. The recoveries for DecaBDE-209 and TriBDE-17 were above the 80 to 120% acceptance limits at 207% and 145%, respectively. Since all samples were <MDL for TriBDE-17, the reported results were not biased by the high recovery. The DecaBDE-209 results for all samples are being qualified with a J flag to indicate the reported values are estimates.

Matrix Spikes and Spike Blanks
Matrix Spikes (MS) and Spike Blanks (SB) have been analyzed for BNAs, EDCs, PBDEs, PCBs, WTPH-Dx and Chlorinated Pesticides. All MS, MSD and SB recoveries were within acceptance limits except for the following:

1. BNAs
- The recovery for Analine in the SB, MS and MSD was 0% compared to the lower acceptance limit of 10%. Since no sample showed a measured response above the MDL, the low recovery may indicate that Analine could not be detected at the reported MDL. The MDL and RDL values should be treated as estimates.

- The recovery for Di-N-Octyl Phthalate in the MSD at 156% was slightly above upper acceptance limit of 151%. It is not expected that this indicates a bias to the reported data since all other QC for this parameter are acceptable.

2. PBDEs
The recovery for DecaBDE-209 in the matrix spike was 44% compared to the lower acceptance limit of 50%. The spike blank recovery was 36% which is also below the lower acceptance limit of 50%. All DecaBDE-209 results have been qualified with a J flag to indicate the reported values are estimates.

3. Chlorinated Pesticides
Selected parameters showed measured recoveries below the acceptance limits for the spike blank but were acceptable for the matrix spike or matrix spike duplicate, with the exception of Endrin Aldehyde. This parameter showed 0% recovery for all spikes. Since no sample showed a measured response above the MDL, the low recovery may indicate that Endrin Aldehyde could not be detected at the reported MDL. The MDL and RDL values should be treated as estimates.

Laboratory Replicate Samples
A laboratory duplicate sample(s) was analyzed for each Organics parameter. The relative percent differences (RPDs) for laboratory duplicates are compared to the acceptance limits when at least one value is at or above the RDL. All RPD values that met this were less than or equal to the acceptance limit of 35%, except for the following:

1. BNAs
The RPD value for Chrysene for Sample L48629-8 was outside the 35% limit at 40%. A J flag has been applied to the Chrysene value for Sample L48629-8 to indicate the reported value should be treated as an estimate. No other sample data for Chrysene has been flagged since it is unknown if the heterogeneity applies to other samples.

2. PBDEs
The RPD value for DecaBDE-209 for Sample L48629-8 was outside the 35% limit at 72%. All sample data for DecaBDE-209 have been qualified with the J flag to indicate the results are estimated values since the laboratory duplicate, SB, MS and LCS all showed unacceptable results.

3. WTPH-Dx
The RPD values for the Diesel Range and Lube Oil Range results for Sample L48633-1 were both outside the 35% limit at 200%. A J flag has been applied to both values for this sample to indicate the reported values should be treated as estimates. No other sample data for Diesel Range and Lube Oil Range results have been flagged since it is unknown if the observed heterogeneity applies to other samples.

Additional Data Quality Issues

PCBs

The continuing calibration checks for Aroclor 1260 were below the acceptance limit for several samples. This Aroclor was detected only in Samples L48633-2, -8 and -9, therefore only the results for these samples have been qualified with a JG flag to indicate the reported values may be biased low.

TABLE 1 SEDIMENT SAMPLE INVENTORY

Sample		Locator	AVS	PSD	Nutrients[1]	Solids,[2] pH	TOC	Total Metals[3]	SEM[4]	BNAs[5]	EDCs[6]	Pest/ PCBs/PBDEs	WTPH-Dx
L48633-1	0478	0478		X	X	X	X	X		X	X	X	X
L48633-2	A434	A434		X	X	X	X	X		X	X	X	X
L48633-3	00631	00631		X	X	X	X	X		X	X	X	X
L48633-4	0432	0432		X	X	X	X	X		X	X	X	X
L48633-5	0474	0474		X	X	X	X	X		X	X	X	X
L48633-6	0322	0322	X	X	X	X	X	X	X	X	X	X	X
L48633-7	A320	A320		X	X	X	X	X		X	X	X	X
L48633-8	0317	0317		X	X	X	X	X		X	X	X	X
L48633-9	A315	A315		X	X	X	X	X		X	X	X	X
L48629-1	X322	X322	X	X	X	X	X	X	X	X	X	X	X
L48629-2	BB322	BB322	X	X	X	X	X	X	X	X	X	X	X
L48629-3	E322	E322	X	X	X	X	X	X	X	X	X	X	X
L48629-4	F322	F322	X	X	X	X	X	X	X	X	X	X	X
L48629-5	FF322	FF322	X	X	X	X	X	X	X	X	X	X	X
L48629-6	AD322	AD322	X	X	X	X	X	X	X	X	X	X	X
L48629-7	AE322	AE322	X	X	X	X	X	X	X	X	X	X	X
L48629-8	G322	G322	X	X	X	X	X	X	X	X	X	X	X
L48629-9	QQ322	QQ322	X	X	X	X	X	X	X	X	X	X	X
L48629-10	P322	P322	Could not be collected										

1 Nutrients = Ammonia nitrogen, *o*-Phosphate, Total phosphorus (analyzed and reported with Metals).
2 Solids = Total Solids.
3 Total Metals = Hg, Ag, As, Cd, Cr, Cu, Pb, Ni, P and Zn.
4 SEM = Ag, As, Cd, Cr, Cu, Hg, Ni, Pb and Zn.
5 BNAs = low-level, including chlorobenzenes.
6 EDCs = bis(2-ethylhexyl)adipate, bisphenol A, total 4-nonylphenol, estrone, estradiol and ethynyl estradiol

TABLE 2
QC SAMPLE FREQUENCY FOR SEDIMENT MICROBIAL, CHEMICAL AND PHYSICAL PARAMETERS

Parameter	Method Blank	Duplicate	Triplicate	Matrix Spike	SRM / LCS	Surrogates
Ammonia Nitrogen, *o*-Phosphate	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	No	No
pH	No	See Triplicate	5% minimum, 1 per QC batch	No	No	No
PSD	No	See Triplicate	5% minimum, 1 per QC batch	No	No	No
Total Solids	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	No	No	No
TOC	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	1 per QC batch	No
AVS	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	No	No
Metals, SEM Metals	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 or more LCS per QC batch (total metals only)	No
BNAs / EDCs	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 per QC batch (BNAs only)	Yes
PCBs/Chlorinated Pesticides	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 per QC batch	Yes
WTPH-Dx	1 per QC batch	5% minimum, 1 per QC batch	No	No	No	Yes

TABLE 3 - SUMMARY OF DATA QUALIFIERS

Qualifier	Definition
<MDL	Applied when a target analyte is not detected or detected at a concentration less than the associated method detection limit (MDL). The MDL is the lowest concentration at which a sample result will be reported.
<RDL	Applied when a target analyte is detected at a concentration greater than or equal to the associated MDL but less than the associated reporting detection limit (RDL). RDL is defined as the lowest concentration at which an analyte can reliably be quantified.
RDL	Applied when a target analyte is detected at a concentration that, in the raw data is equal to the RDL.
TA	Applied to a sample result when additional narrative information is available in the text field. The additional information may help to qualify the sample result but is not necessarily covered by any other qualifier.
B	**B (including B2 and B3)** are applied when the parameter was detected at a concentration at or above the MDL in the associated blank(s) and has met the appropriate rule or condition, as defined by the method or regulatory program. Use: Application of the "B" flags depends on the ratio of the sample to blank result and the particular parameter according to these rules: - Add a "B" flag to all parameters if the associated blank is ≥ the MDL and the sample result is ≥ MDL but ≤ 5 times the blank. - Add a "B2" flag to common organic lab contaminants (Acetone, 2-Butanone, Methylene Chloride, Bis(2-ethylhexyl) Phthalate, Butyl Benzyl Phthalate and Di-n-butyl Phthalate) if the method blank is ≥ the MDL and the sample result is > 5 and ≤ 10 times the blank. - Add a "B3" flag to all other parameters if the associated blank is ≥ the MDL and the sample result is > 5 and ≤ 10 times the blank.
E	Applied to a sample result that was measured at a concentration greater than the calibration range of the method. It is applied when the detected analyte concentration exceeds the upper instrument calibration limit and further dilution is not feasible. The reported value is an estimated analyte concentration.
J	Applied to a sample result that is considered an estimated value.
JG	Applied to a sample result that is considered an estimated value with a low bias. This will typically be applied when QC results indicate the recovery of the analyte is below the expected limits of the method.
JL	Applied to a sample result that is considered an estimated value with a high bias. This will typically be applied when QC results indicate the recovery of the analyte is above the expected limits of the method.

ORGANIC CHEMISTRY Detection Limit Values

Method = EPA 3550B / 8270C (GC/MS)
LIMS Product = BNALL
ug/Kg wet weight basis

Analyte	MDL	RDL	Analyte	MDL	RDL
1,2,4-Trichlorobenzene	0.27	0.53	Benzo(g,h,i)perylene	2.7	5.3
1,2-Dichlorobenzene	0.27	0.53	Benzoic Acid	13	26.7
1,2-Diphenylhydrazine	2.7	5.3	Benzyl alcohol	5.3	10.7
1,3-Dichlorobenzene	0.27	0.53	Benzyl Butyl Phthalate	5.3	10.7
1,4-Dichlorobenzene	0.27	0.53	Bis(2-Chloroethoxy)Methane	13	26.7
2,4,5-Trichlorophenol	13	26.7	Bis(2-Chloroethyl)Ether	13	26.7
2,4,6-Trichlorophenol	13	26.7	Bis(2-Chloroisopropyl)Ether	13	26.7
2,4-Dichlorophenol	13	26.7	Bis(2-ethylhexyl)Phthalate	5.3	10.7
2,4-Dimethylphenol	2.7	5.3	Caffeine	5.3	10.7
2,4-Dinitrophenol	27	53.3	Carbazole	2.7	5.3
2,4-Dinitrotoluene	27	53.3	Chrysene	2.7	5.3
2,6-Dinitrotoluene	27	53.3	Coprostanol	53	107
2-Chloronaphthalene	5.3	10.7	Dibenzo(a,h)anthracene	2.7	5.3
2-Chlorophenol	5.3	10.7	Dibenzofuran	2.7	5.3
2-Methylnaphthalene	2.7	5.3	Diethyl Phthalate	5.3	10.7
2-Methylphenol	5.3	10.7	Dimethyl Phthalate	5.3	10.7
2-Nitroaniline	27	53.3	Di-N-Butyl Phthalate	5.3	10.7
2-Nitrophenol	27	53.3	Di-N-Octyl Phthalate	5.3	10.7
3,3'-Dichlorobenzidine	27	53.3	Fluoranthene	2.7	5.33
3-Methylphenol	5.3	10.7	Fluorene	2.7	5.33
3-Nitroaniline	27	53.3	Hexachlorobenzene	0.53	1.07
4,6-Dinitro-O-Cresol	27	53.3	Hexachlorobutadiene	1.3	2.7
4-Bromophenyl Phenyl Ether	13	26.7	Hexachlorocyclobutadiene	27	53.3
4-Chloro-3-Methylphenol	13	26.7	Hexachloroethane	13	26.7
4-Chloroaniline	27	53.3	Indeno(1,2,3-cd)Pyrene	2.7	5.3
4-Chlorophenyl Phenyl Ether	13	26.7	Isophorone	5.3	10.7
4-Methylphenol	5.3	10.7	Naphthalene	2.7	5.3
4-Nitroaniline	27	53.3	Nitrobenzene	5.3	10.7
4-Nitrophenol	27	53.3	N-Nitrosodimethylamine	13	26.7
Acenaphthene	2.7	5.33	N-Nitrosodi-N-Propylamine	5.3	10.7
Acenaphthylene	2.7	5.3	N-Nitrosodiphenylamine	5.3	10.7
Aniline	13	26.7	Pentachlorophenol	13	26.7
Anthracene	2.7	5.3	Phenanthrene	2.7	5.3
Benzo(a)anthracene	2.7	5.3	Phenol	5.3	10.7
Benzo(a)pyrene	2.7	5.3	Pyrene	2.7	5.3
Benzo(b)fluoranthene	2.7	5.3	Pyridine	26	53.3
Benzo(k)fluoranthene	2.7	5.3			

Method = EPA 8081A/8082 (GC/ECD)
LIMS Product = PESTLL
ug/Kg wet weight basis

Analyte	MDL	RDL
4,4'-DDD	0.67	1.33
4,4'-DDE	0.67	1.33
4,4'-DDT	0.67	1.33
Aldrin	0.67	1.33
Alpha-BHC	0.33	0.667
Alpha-Chlordane	0.33	0.667
Beta-BHC	0.33	0.667
Delta-BHC	0.33	0.667

Dieldrin	0.67	1.33
Endosulfan I	0.67	1.33
Endosulfan II	0.67	1.33
Endosulfan Sulfate	0.67	1.33
Endrin	0.67	1.33
Endrin Aldehyde	0.67	1.33
Gamma-BHC (Lindane)	0.33	0.667
Gamma-Chlordane	0.33	0.667
Heptachlor	0.33	0.667
Heptachlor Epoxide	0.33	0.667
Methoxychlor	3.3	6.67
Toxaphene	6.7	13.3

Method = EPA 8081A/8082 (GC/ECD)
LIMS Product = PCBLL
ug/Kg wet weight basis

Analyte	**MDL**	**RDL**
Aroclor 1016	0.83	1.67
Aroclor 1221	1.7	3.33
Aroclor 1232	1.7	3.33
Aroclor 1242	0.83	1.67
Aroclor 1248	0.83	1.67
Aroclor 1254	0.83	1.67
Aroclor 1260	0.83	1.67

Method = EPA 3550B / 8270C (GC/MS)
LIMS Product = EDC
ug/Kg wet weight basis

Analyte	**MDL**	**RDL**
Bis(2-ethylhexyl)adipate	10	20
Bisphenol A	10	20
Total 4-Nonylphenol	20	40

Method = NWTPH-DX (GC/FID)
LIMS Product = WTPH-Dx
mg/Kg wet weight basis

Analyte	**MDL**	**RDL**
Diesel range (C13 - C24)	25	25
Lube oil range (>C24)	25	25

CHAIN OF CUSTODY FORMS

CHAIN OF CUSTODY

RELINQUISHED BY	Date	Time
JEAN POWER	8/10/09	1705
RECEIVED BY	Date	Time
[illegible]	8-10-09	1705

Sample Number(s) L48629 1-9

Personnel: SH/JP(All)

Login Number: P48629

NEWAUKUM CREEK SEDIMENTS 2009

Project Number: 421240C

Ø322

Sample No. (Type)	P48629-1	P48629-2	P48629-3
Locator	X322	BB322	E322
Short Loc. Desc.	NEWK MOUTH	Newaukum	NEWK 400
Locator Desc.	NEWAUKUM CREEK NEAR THE MOUTH OFF OF	SE 392ND ST	NEWAUKUM CREEK AT SE 400 ST BRIDGE
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	10-AUG-09/1110	10-AUG-09/0950	10-AUG-09/1210
End Date/Time			
Time Span			
Sample Depth			
Comments	~~Issaquah Cr.@routine water site USGS~~ S.E. 358TH ST	~~Issaquah Cr @Gilman Road~~ 392ND BENTHOS SITE END	~~Issaquah Cr.@Dogwood Road~~ TMDL - STEEP SLOPE
PERSONNEL	SH/JP	SH/JP	SH/JP
SAMP INFO			
SED DEPTH	0-5 cm	0-5 cm	0-5 cm
SED TYPE			
Dept., Matrix, Prod			EXTRA FOR PSD & C
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS
	SAND SILT BROWN NO ODOR NO DEBRIS ~40 SPOONS	SILT SAND BROWN NAT. W/P ~30 SPOONS	SILT SAND BROWN NAT ODOR W/P ~35 SPOONS

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P48629-1	P48629-2	P48629-3
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX
	ADDED PBDE	→	ADDED PBDE
	EDC-LVI	→	EDC-LVI

continue ...

Login Number: P48629

Page: 8

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P48629-10
	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX
	PBDE
	EDC-LVI

End of Fieldsheet.

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-4	P48629-5	P48629-6
Locator	F322	AD322 FF 322	AD322
Short Loc. Desc.	Nwkm@416br	Nwk@Mahler	Nwk@Mahler
Locator Desc.	NEWAUKUM SAMPLE OFF BRIDGE	~~US NEWAUKUM CR. @ MAHLER PARK SE 244~~ SE 424TH ST	US NEWAUKUM CR. @ MAHLER PARK SE 244
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	10-AUG-09/1240	10-AUG-09/1300	/1322
End Date/Time			
Time Span			
Sample Depth			
Comments	~~Issaquah Cr.@Newport Way~~ routine sit SE 416TH / RED HOUSE	~~Issaquah Cr.@Sycamore~~ Rd. MAHLER ~~STR~~ SIGN	~~Issaquah Cr.@113th Place~~ MAHLER PARK
PERSONNEL	SH/JP	SH/JP	
SAMP INFO			
SED DEPTH	0-5 cm	0-5cm	0-5 cm
SED TYPE			
Dept., Matrix, Prod		UNDER BRIDGE	MUCH SED VIS. BRIDGE
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS
	SILT GRAVEL BROWN NAT. ODOR W/P ~25 SPOONS	SILT SAND BR NAT W/P ~25 SPOONS	SILT SAND BROWN H_2S SLIGHT? W/P ~20 SP

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-4	P48629-5	P48629-6
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX
	ADDED PBDE	→	→
	EDC-LVI	→	→

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-7	P48629-8	P48629-9
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX
	ADDED PBDE	→	→
	EDC-LVI	→	→

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P48629-7	P48629-8	P48629-9
Locator	AE322	G322	QQ322
Short Loc. Desc.	Nwkm@248ds	NEWK 424	Newaukum
Locator Desc.	DS NEWAUKUM CR. @ SE 248TH	NEWAUKUM CREEK AT BRIDGE ON SE 424TH	SE 416TH -QUARRY
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	10-AUG-09 / 1355	10-AUG-09 / 1425	10-AUG-09 / 1515
End Date/Time			BRIDGE BEING REPLACED - ROAD CLOSED
Time Span			
Sample Depth			
Comments	~~Issaquah Cr.@May Valley Rd.~~ McHUGH AVE LINDA'S FLOWERS	~~Issaquah Cr.@229th Dr~~. SE TMDL - GRAPEVINES	~~Issaquah Cr.@Cedar Grove~~ Rd. PARKING LOT
PERSONNEL	SH / JP	SH / JP	SH / JP
SAMP INFO			
SED DEPTH	0-5 cm	0-5 cm	0-5
SED TYPE			
Dept., Matrix, Prod	UNDER + D.S. BRIDGE	UNDER BRIDGE	
	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS	3 FRSHWTRSED AVS
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS
	SAND SILT BR NAT W/P ~30 SP(OUND)	SILT SAND BROWN NAT W/P ~20 SP	SILT SAND B N W/P ~20

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-7	P48629-8	P48629-9
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX
	ADDED PBDE	→	→
	EDC-LVI	→	→

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-4	P48629-5	P48629-6
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX
	ADDED PBDE	→	→
	EDC-LVI	→	→

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-10	
Locator	P322	
Short Loc. Desc.	292ND AVE SE / SE 46TH INTERSECTION	
Locator Desc.		
Site	STREAMS	
Start Date/Time		
End Date/Time		
Time Span		
Sample Depth		
Comments	~~Issaquah Cr.@SE 156th St.~~ DOWNSTREAM SIDE	
PERSONNEL		
SAMP INFO		
SED DEPTH		
SED TYPE		
Dept., Matrix, Prod		
	3 FRSHWTRSED AVS	
	3 FRSHWTRSED NH3-KCL	
	3 FRSHWTRSED ORTHOP-OL	
	3 FRSHWTRSED PH	
	3 FRSHWTRSED RSD	
	3 FRSHWTRSED TOC	
	3 FRSHWTRSED TOTS	
	6 FRSHWTRSED AG-ICPMS	
	6 FRSHWTRSED AG-SEM, EXT	
	6 FRSHWTRSED AS-ICPMS	
	6 FRSHWTRSED AS-SEM, EXT	
	6 FRSHWTRSED CD-ICPMS	
	6 FRSHWTRSED CD-SEM, EXT	
	6 FRSHWTRSED CR-ICPMS	
	6 FRSHWTRSED CR-SEM, EXT	
	6 FRSHWTRSED CU-ICPMS	

DELETE — NO ACCESS — NEW BARBED WIRE FENCE

continue ...

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-10
6	FRSHWTRSED	CU-SEM, EXT
6	FRSHWTRSED	HG-CVAA-M
6	FRSHWTRSED	HG-SEM, EXT
6	FRSHWTRSED	NI-ICPMS
6	FRSHWTRSED	NI-SEM, EXT
6	FRSHWTRSED	P-ICPMS
6	FRSHWTRSED	PB-ICPMS
6	FRSHWTRSED	PB-SEM, EXT
6	FRSHWTRSED	ZN-ICPMS
6	FRSHWTRSED	ZN-SEM, EXT
7	FRSHWTRSED	BNALLFULL
7	FRSHWTRSED	EDC
7	FRSHWTRSED	PCBLL
7	FRSHWTRSED	PESTLL
7	FRSHWTRSED	WTPH-DX

PBDE
EDC-LVI

End of Fieldsheet.

NEWAUKUM CREEK SEDIMENTS-2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48629-1	P48629-2	P48629-3
6	FRSHWTRSED	CU-SEM, EXT	6	FRSHWTRSED	CU-SEM, EXT	6	FRSHWTRSED	CU-SEM, EXT
6	FRSHWTRSED	HG-CVAA-M	6	FRSHWTRSED	HG-CVAA-M	6	FRSHWTRSED	HG-CVAA-M
6	FRSHWTRSED	HG-SEM, EXT	6	FRSHWTRSED	HG-SEM, EXT	6	FRSHWTRSED	HG-SEM, EXT
6	FRSHWTRSED	NI-ICPMS	6	FRSHWTRSED	NI-ICPMS	6	FRSHWTRSED	NI-ICPMS
6	FRSHWTRSED	NI-SEM, EXT	6	FRSHWTRSED	NI-SEM, EXT	6	FRSHWTRSED	NI-SEM, EXT
6	FRSHWTRSED	P-ICPMS	6	FRSHWTRSED	P-ICPMS	6	FRSHWTRSED	P-ICPMS
6	FRSHWTRSED	PB-ICPMS	6	FRSHWTRSED	PB-ICPMS	6	FRSHWTRSED	PB-ICPMS
6	FRSHWTRSED	PB-SEM, EXT	6	FRSHWTRSED	PB-SEM, EXT	6	FRSHWTRSED	PB-SEM, EXT
6	FRSHWTRSED	ZN-ICPMS	6	FRSHWTRSED	ZN-ICPMS	6	FRSHWTRSED	ZN-ICPMS
6	FRSHWTRSED	ZN-SEM, EXT	6	FRSHWTRSED	ZN-SEM, EXT	6	FRSHWTRSED	ZN-SEM, EXT
7	FRSHWTRSED	BNALLFULL	7	FRSHWTRSED	BNALLFULL	7	FRSHWTRSED	BNALLFULL
7	FRSHWTRSED	EDC	7	FRSHWTRSED	EDC	7	FRSHWTRSED	EDC
7	FRSHWTRSED	PCBLL	7	FRSHWTRSED	PCBLL	7	FRSHWTRSED	PCBLL
7	FRSHWTRSED	PESTLL	7	FRSHWTRSED	PESTLL	7	FRSHWTRSED	PESTLL
7	FRSHWTRSED	WTPH-DX	7	FRSHWTRSED	WTPH-DX	7	FRSHWTRSED	WTPH-DX

ADDED PBDE EDC-LVI

continue ...

Login Number: P48633

STREAMS SEDIMENTS-LEGACY 2009

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P48633-1	P48633-2	P48633-3
Locator	0478	A434	00631
Short Loc. Desc.	LTLE BEAR		ISSMOUTH
Locator Desc.	LITTLE BEAR CREEK//522 E, WOODINVILL		ISSAQUAH CREEK MOUTH
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	12-AUG-09/1225	12-AUG-09/1415	12-AUG-09/1115
End Date/Time			
Time Span	JP	JP	JP
Sample Depth			
Comments	Little Bear Creek-mouth	Thornton Creek-footbridge	Issaquah Creek-mouth
SAMP INFO			
SED DEPTH	0-5 cm	0-5 cm	0-5 cm
SED TYPE			
Dept., Matrix, Prod			
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED PH
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS
	5 FRSHWTRSED FC-MPN	5 FRSHWTRSED FC-MPN	5 FRSHWTRSED FC-MPN
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M
	SAND GRAVEL NO DEBRIS BROWN NO ODOR	SILT SAND BROWN H_2S MOD W/P 6 CORES	EXTRA FOR PSDGL SILT SAND BROWN NO ODOR/DEBRIS 7 CORE TUBES

C.O.C
8/12/09
ON BACK →

continue ...

STREAMS SEDIMENTS-LEGACY 2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48633-1	P48633-2	P48633-3
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED EDC-LVI	7 FRSHWTRSED EDC-LVI	7 FRSHWTRSED EDC-LVI
	7 FRSHWTRSED PBDE	7 FRSHWTRSED PBDE	7 FRSHWTRSED PBDE
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX

continue ...

CHAIN OF CUSTODY

RELINQUISHED BY	Date	Time
[illegible]	8/12/09	1505
RECEIVED BY	Date	Time
[illegible]	8/12/09	1505

Sample Number(s): L48633 1-5, 8+9 (AID)

STREAMS SEDIMENTS-LEGACY 2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48633-4	P48633-5	P48633-6
Locator	0432	0474	0322
Short Loc. Desc.		NORTH CR	NEWAK CR
Locator Desc.		NORTH CREEK//UPSTREAM SIDE OF FREEWA	NEWAUKUM CREEK//USGS GAGING STATION
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	12-AUG-09/1330	12-AUG-09/1350	10-AUG-09/1140
End Date/Time	JP	JP	SH/JP
Time Span	~12 SPOONS		
Sample Depth	SAND, SILT, BROWN NAT. ODOR W/P		
Comments	McAleer Creek	North Creek	Newaukum Creek
SAMP INFO			
SED DEPTH	0-5 cm		0-5 cm
SED TYPE			
Dept., Matrix, Prod		HOMELESS PERSON - SMELLS LIKE PEE	
	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED NH3-KCL	3 FRSHWTRSED AVS
	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED ORTHOP-OL	3 FRSHWTRSED NH3-KCL
DELETE MICRO	3 FRSHWTRSED PH	3 FRSHWTRSED PH	3 FRSHWTRSED ORTHOP-OL
	3 FRSHWTRSED PSD	3 FRSHWTRSED PSD	3 FRSHWTRSED PH
	3 FRSHWTRSED TOC	3 FRSHWTRSED TOC	3 FRSHWTRSED PSD
	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOTS	3 FRSHWTRSED TOC
	5 FRSHWTRSED FC-MPN DEL	5 FRSHWTRSED FC-MPN DEL	3 FRSHWTRSED TOTS
	6 FRSHWTRSED AG-ICPMS	6 FRSHWTRSED AG-ICPMS	5 FRSHWTRSED FC-MPN DELETE
	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-SEM, EXT	6 FRSHWTRSED AG-ICPMS
	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AS-ICPMS	6 FRSHWTRSED AG-SEM, EXT
	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-SEM, EXT	6 FRSHWTRSED AS-ICPMS
	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED CD-ICPMS	6 FRSHWTRSED AS-SEM, EXT
	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-SEM, EXT	6 FRSHWTRSED CD-ICPMS
	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CR-ICPMS	6 FRSHWTRSED CD-SEM, EXT
	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-SEM, EXT	6 FRSHWTRSED CR-ICPMS
	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CU-ICPMS	6 FRSHWTRSED CR-SEM, EXT
	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-SEM, EXT	6 FRSHWTRSED CU-ICPMS
	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED HG-CVAA-M	6 FRSHWTRSED CU-SEM, EXT

CHAIN OF CUSTODY

RELINQUISHED BY	DATE	TIME
Jean Brown	8/10/09	1705
[illegible]	8-10-09	1705

L48633 6+7

SILT
SAND
BROWN
W/P
NAT. ODOR
~12 SPOONS

SAND
SILT
BROWN
NO ODOR/DEBRIS
40 SPOONS

continue ...

STREAMS SEDIMENTS-LEGACY 2009

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P48633-4	P48633-5	P48633-6
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-CVAA-M
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-ICPMS
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC-LVI	7 FRSHWTRSED EDC-LVI	7 FRSHWTRSED EDC
	7 FRSHWTRSED PBDE	7 FRSHWTRSED PBDE	7 FRSHWTRSED EDC-LVI
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PBDE
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED PESTLL
			7 FRSHWTRSED WTPH-DX

continue ...

STREAMS SEDIMENTS-LEGACY 2009

Project Number: 421240C

Personnel: _____

Sample No. (Type)	P48633-7	P48633-8	P48633-9
Locator	A320	0317	A315
Short Loc. Desc.	BIG SOOS	SPRBR CR	MILL CR
Locator Desc.	BIG SOOS CREEK//USGS GAGING STATION	SPRINGBROOK CREEK//BRIDGE AT N END O	HILL CREEK (MILL)//BRIDGE AT 68TH AN
Site	STREAMS	STREAMS	STREAMS
Start Date/Time	8/10/09 / 0855	12-AUG-09 / 0910	12-AUG-09 / 1005
End Date/Time	SH/JP	JP	JP
Time Span			
Sample Depth			
Comments	Soos Creek	Springbrook Creek-under bridge WATER LEVEL WAY THAT	Mill Creek REDDISH ALGAE
SAMP INFO			
SED DEPTH	0-5 cm	0-5 cm	0-5 cm
SED TYPE			
Dept., Matrix, Prod	Sand/silt/brown/natural/ no debris	CLAY, SILT, BR NO DEBRIS NAT ODOR	SILT, SAND, BROWN NO ODOR W/P
	3 | FRSHWTRSED | NH3-KCL	3 | FRSHWTRSED | NH3-KCL	3 | FRSHWTRSED | NH3-KCL
	3 | FRSHWTRSED | ORTHOP-OL	3 | FRSHWTRSED | ORTHOP-OL	3 | FRSHWTRSED | ORTHOP-OL
	3 | FRSHWTRSED | PH	3 | FRSHWTRSED | PH	3 | FRSHWTRSED | PH
	3 | FRSHWTRSED | PSD	3 | FRSHWTRSED | PSD	3 | FRSHWTRSED | PSD
	3 | FRSHWTRSED | TOC	3 | FRSHWTRSED | TOC	3 | FRSHWTRSED | TOC
	3 | FRSHWTRSED | TOTS	3 | FRSHWTRSED | TOTS	3 | FRSHWTRSED | TOTS
	5 | FRSHWTRSED | FC-MPN DELETE	5 | FRSHWTRSED | FC-MPN	5 | FRSHWTRSED | FC-MPN
	6 | FRSHWTRSED | AG-ICPMS	6 | FRSHWTRSED | AG-ICPMS	6 | FRSHWTRSED | AG-ICPMS
	6 | FRSHWTRSED | AG-SEM, EXT	6 | FRSHWTRSED | AG-SEM, EXT	6 | FRSHWTRSED | AG-SEM, EXT
	6 | FRSHWTRSED | AS-ICPMS	6 | FRSHWTRSED | AS-ICPMS	6 | FRSHWTRSED | AS-ICPMS
	6 | FRSHWTRSED | AS-SEM, EXT	6 | FRSHWTRSED | AS-SEM, EXT	6 | FRSHWTRSED | AS-SEM, EXT
	6 | FRSHWTRSED | CD-ICPMS	6 | FRSHWTRSED | CD-ICPMS	6 | FRSHWTRSED | CD-ICPMS
	6 | FRSHWTRSED | CD-SEM, EXT	6 | FRSHWTRSED | CD-SEM, EXT	6 | FRSHWTRSED | CD-SEM, EXT
	6 | FRSHWTRSED | CR-ICPMS	6 | FRSHWTRSED | CR-ICPMS	6 | FRSHWTRSED | CR-ICPMS
	6 | FRSHWTRSED | CR-SEM, EXT	6 | FRSHWTRSED | CR-SEM, EXT	6 | FRSHWTRSED | CR-SEM, EXT
	6 | FRSHWTRSED | CU-ICPMS	6 | FRSHWTRSED | CU-ICPMS	6 | FRSHWTRSED | CU-ICPMS
	6 | FRSHWTRSED | CU-SEM, EXT	6 | FRSHWTRSED | CU-SEM, EXT	6 | FRSHWTRSED | CU-SEM, EXT
	6 | FRSHWTRSED | HG-CVAA-M	6 | FRSHWTRSED | HG-CVAA-M	6 | FRSHWTRSED | HG-CVAA-M

CREEK BACKED UP + HIGH - CONSTRUCTION DOWNSTREAM ~20 SPOONS

~12 SPOONS

continue ...

STREAMS SEDIMENTS-LEGACY 2009

Project Number: 421240C Personnel: _____

Sample No. (Type)	P48633-7	P48633-8	P48633-9
	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT	6 FRSHWTRSED HG-SEM, EXT
	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS	6 FRSHWTRSED NI-ICPMS
	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT	6 FRSHWTRSED NI-SEM, EXT
	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS	6 FRSHWTRSED P-ICPMS
	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS	6 FRSHWTRSED PB-ICPMS
	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT	6 FRSHWTRSED PB-SEM, EXT
	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS	6 FRSHWTRSED ZN-ICPMS
	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT	6 FRSHWTRSED ZN-SEM, EXT
	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL	7 FRSHWTRSED BNALLFULL
	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC	7 FRSHWTRSED EDC
	7 FRSHWTRSED EDC-LVI	7 FRSHWTRSED EDC-LVI	7 FRSHWTRSED EDC-LVI
	7 FRSHWTRSED PBDE	7 FRSHWTRSED PBDE	7 FRSHWTRSED PBDE
	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL	7 FRSHWTRSED PCBLL
	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL	7 FRSHWTRSED PESTLL
	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX	7 FRSHWTRSED WTPH-DX

End of Fieldsheet.

King County Environmental Lab Analytical Report

	Sample 1	Sample 2	Sample 3
Project:	421240C	421240C	421240C
Locator:	X322	BB322	E322
Descrip:	NEWAUKUM CREEK NEA	SE 392ND ST	NEWAUKUM CREEK AT
Sample:	L48629-1	L48629-2	L48629-3
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/10/09 11:10	8/10/09 9:50	8/10/09 12:10
TimeSpan:			
TotalSolid:	59.8	35.4	61.7
ClientLoc:			
SampDepth:			
	DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
CV ASTM D422															
Clay*		<MDL	0.86	1.73	%		<MDL	1.3	2.7	%		<MDL	2.1	4.12	%
Fines*	8.6		0.86	1.73	%	21.6		1.3	2.7	%	37.1		2.1	4.12	%
Gravel*	8.3		0.17	1.73	%	11.1		0.27	2.7	%	8.9		0.41	4.12	%
p+0.00*	1.5		0.17	1.73	%	16.7		0.27	2.7	%	8.1		0.41	4.12	%
p+1.00*	4.7		0.17	1.73	%	19.2		0.27	2.7	%	11.4		0.41	4.12	%
p+10.0(equal/more than)*		<MDL	0.86	1.73	%		<MDL	1.3	2.7	%		<MDL	2.1	4.12	%
p+2.00*	26.5		0.17	1.73	%	12.7		0.27	2.7	%	10.2		0.41	4.12	%
p+3.00*	35.1		0.17	1.73	%	8.5		0.27	2.7	%	7.5		0.41	4.12	%
p+4.00*	12.6		0.17	1.73	%	6.2		0.27	2.7	%	6.5		0.41	4.12	%
p+5.00*	5.2		0.86	1.73	%	16.2		1.3	2.7	%	28.8		2.1	4.12	%
p+6.00*	1.7		0.86	1.73	%		<MDL	1.3	2.7	%	4.1		2.1	4.12	%
p+7.00*	1.7		0.86	1.73	%	2.7		1.3	2.7	%	2.1		2.1	4.12	%
p+8.00*		<MDL	0.86	1.73	%	2.7		1.3	2.7	%	2.1		2.1	4.12	%
p+9.00*		<MDL	0.86	1.73	%		<MDL	1.3	2.7	%		<MDL	2.1	4.12	%
p-1.00*	3.8		0.17	1.73	%	7.7		0.27	2.7	%	5		0.41	4.12	%
p-2.00(less than)*	3.3		0.17	1.73	%	2.1		0.27	2.7	%	2.7		0.41	4.12	%
p-2.00*	1.2		0.17	1.73	%	1.3		0.27	2.7	%	1.2		0.41	4.12	%
Sand*	80.5		0.17	1.73	%	63.3		0.27	2.7	%	43.6		0.41	4.12	%
Silt*	8.6		0.86	1.73	%	21.6		1.3	2.7	%	37.1		2.1	4.12	%
CV EPA DEC 1991															
Sulfide, Acid Volatile		<MDL,JG	0.42	1.66	mg/Kg		<MDL,JG	0.71	2.82	mg/Kg		<MDL,JG	0.41	1.62	mg/Kg
CV KEROUEL & AMINOT 1997(KCL)															
Ammonia Nitrogen	5.54		0.25	0.495	mg/Kg	50.8		0.68	1.37	mg/Kg	14.1		0.39	0.791	mg/Kg
CV SM2540-G															
Total Solids*	59.8		0.005	0.01	%	35.4		0.005	0.01	%	61.7		0.005	0.01	%
CV SM4500-P-F OL															
Orthophosphate Phosphorus	14.7		1.6	4	mg/Kg	46.6		2.8	6.95	mg/Kg	24		1.6	3.94	mg/Kg
CV SW846 9045C															
pH*	7.3				pH	7.57				pH	7.21				pH
CV SW846 9060-PSEP96															
Total Organic Carbon	9180		1000	2020	mg/Kg	36700		3700	7230	mg/Kg	25900		3200	6420	mg/Kg
MT EPA 200.7															
Arsenic, Extractable, SEM	0.9	<RDL	0.84	4.16	mg/Kg	1.6	<RDL	1.4	7.06	mg/Kg	0.81	<RDL	0.81	4.05	mg/Kg
Cadmium, Extractable, SEM		<MDL	0.067	0.333	mg/Kg	0.16	<RDL	0.11	0.565	mg/Kg		<MDL	0.065	0.324	mg/Kg
Chromium, Extractable, SEM	0.91		0.1	0.498	mg/Kg	1.14		0.17	0.847	mg/Kg	0.887		0.097	0.485	mg/Kg
Copper, Extractable, SEM	4.63		0.13	0.666	mg/Kg	7.2		0.23	1.13	mg/Kg	3.68		0.13	0.647	mg/Kg
Lead, Extractable, SEM	1.7	<RDL	0.67	3.33	mg/Kg	5.1	<RDL	1.1	5.65	mg/Kg	2.3	<RDL	0.65	3.24	mg/Kg
Nickel, Extractable, SEM	1.92		0.17	0.831	mg/Kg	1.92		0.28	1.42	mg/Kg	0.841		0.16	0.809	mg/Kg
Silver, Extractable, SEM		<MDL	0.13	0.666	mg/Kg		<MDL	0.23	1.13	mg/Kg		<MDL	0.13	0.647	mg/Kg
Zinc, Extractable, SEM	12.2		0.17	0.831	mg/Kg	34.7		0.28	1.42	mg/Kg	17.3		0.16	0.809	mg/Kg
MT EPA 245.1*SW846 7470A															
Mercury, Extractable, SEM		<MDL	0.0017	0.00498	mg/Kg		<MDL	0.0028	0.00847	mg/Kg		<MDL	0.0016	0.00485	mg/Kg
MT SW846 3050B*SW846 6020A															
Arsenic, Total, ICP-MS	3.53		0.02	0.104	mg/Kg	4.63		0.034	0.175	mg/Kg	2.41		0.019	0.0992	mg/Kg
Cadmium, Total, ICP-MS	0.0758		0.01	0.0518	mg/Kg	0.18		0.018	0.0873	mg/Kg	0.0776		0.0099	0.0496	mg/Kg
Chromium, Total, ICP-MS	19.9		0.42	2.07	mg/Kg	16.2		0.71	3.5	mg/Kg	9.81		0.39	1.98	mg/Kg
Copper, Total, ICP-MS	15.4		0.84	4.15	mg/Kg	23.2		1.4	6.98	mg/Kg	11.6		0.79	3.97	mg/Kg
Lead, Total, ICP-MS	3.48		0.02	0.104	mg/Kg	8.64		0.034	0.175	mg/Kg	4.36		0.019	0.0992	mg/Kg
Nickel, Total, ICP-MS	19.7		0.2	1.04	mg/Kg	12.9		0.34	1.75	mg/Kg	7.7		0.19	0.992	mg/Kg
Phosphorus, Total, ICP-MS	370	<RDL	200	1040	mg/Kg	760	<RDL	340	1750	mg/Kg	370	<RDL	190	992	mg/Kg
Silver, Total, ICP-MS	0.045	<RDL	0.01	0.0518	mg/Kg	0.0879		0.018	0.0873	mg/Kg	0.041	<RDL	0.0099	0.0496	mg/Kg
Zinc, Total, ICP-MS	42.3		1	5.18	mg/Kg	81.1		1.8	8.73	mg/Kg	45.7		0.99	4.96	mg/Kg
MT SW846 7471B															
Mercury, Total, CVAA	0.035	<RDL	0.008	0.0803	mg/Kg	0.031	<RDL	0.014	0.135	mg/Kg	0.018	<RDL	0.0079	0.0799	mg/Kg
OR SW846 3550B*EPA 1614															
DecaBDE-209	0.147	J	0.055	0.112	ug/Kg	1.08	J	0.093	0.188	ug/Kg	0.259	J	0.053	0.108	ug/Kg
HeptaBDE-183		<MDL	0.011	0.0222	ug/Kg		<MDL	0.019	0.0376	ug/Kg		<MDL	0.011	0.0216	ug/Kg
HeptaBDE-190		<MDL	0.011	0.0222	ug/Kg		<MDL	0.019	0.0376	ug/Kg		<MDL	0.011	0.0216	ug/Kg
HexaBDE-138	0.014	<RDL,TA	0.011	0.0222	ug/Kg	0.027	<RDL,TA	0.019	0.0376	ug/Kg	0.014	<RDL,TA	0.011	0.0216	ug/Kg
HexaBDE-153	0.0624		0.011	0.0222	ug/Kg	0.149		0.019	0.0376	ug/Kg	0.0546		0.011	0.0216	ug/Kg
HexaBDE-154	0.0298		0.011	0.0222	ug/Kg	0.041		0.019	0.0376	ug/Kg	0.014	<RDL	0.011	0.0216	ug/Kg
PentaBDE-100	0.014	<RDL	0.011	0.0222	ug/Kg	0.0387		0.019	0.0376	ug/Kg	0.019	<RDL	0.011	0.0216	ug/Kg
PentaBDE-85		<MDL	0.011	0.0222	ug/Kg		<MDL	0.019	0.0376	ug/Kg		<MDL	0.011	0.0216	ug/Kg
PentaBDE-99	0.043	B	0.011	0.0222	ug/Kg	0.146	B3	0.019	0.0376	ug/Kg	0.0783	B3	0.011	0.0216	ug/Kg
TetraBDE-47	0.0681	B	0.011	0.0222	ug/Kg	0.201	B3	0.019	0.0376	ug/Kg	0.111	B3	0.011	0.0216	ug/Kg
TetraBDE-66		<MDL	0.011	0.0222	ug/Kg		<MDL	0.019	0.0376	ug/Kg		<MDL	0.011	0.0216	ug/Kg
TetraBDE-71		<MDL,TA	0.011	0.0222	ug/Kg		<MDL,TA	0.019	0.0376	ug/Kg		<MDL,TA	0.011	0.0216	ug/Kg
TriBDE-17		<MDL	0.011	0.0222	ug/Kg		<MDL	0.019	0.0376	ug/Kg		<MDL	0.011	0.0216	ug/Kg
TriBDE-28		<MDL,TA	0.011	0.0222	ug/Kg		<MDL,TA	0.019	0.0376	ug/Kg		<MDL,TA	0.011	0.0216	ug/Kg
OR SW846 3550B*SW846 8081B															
4,4'-DDD		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
4,4'-DDE		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
4,4'-DDT		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Aldrin		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Alpha-BHC		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Alpha-Chlordane		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Beta-BHC		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Delta-BHC		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Dieldrin		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Endosulfan I		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Endosulfan II		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Endosulfan Sulfate		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Endrin		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Endrin Aldehyde		<MDL	1.1	2.22	ug/Kg		<MDL	1.9	3.76	ug/Kg		<MDL	1.1	2.16	ug/Kg
Gamma-BHC (Lindane)		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Gamma-Chlordane		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Heptachlor		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Heptachlor Epoxide		<MDL	0.55	1.12	ug/Kg		<MDL	0.93	1.88	ug/Kg		<MDL	0.53	1.08	ug/Kg
Methoxychlor		<MDL	5.5	11.2	ug/Kg		<MDL	9.3	18.8	ug/Kg		<MDL	5.3	10.8	ug/Kg
Toxaphene		<MDL	11	22.2	ug/Kg		<MDL	19	37.6	ug/Kg		<MDL	11	21.6	ug/Kg
OR SW846 3550B*SW846 8082A															
Aroclor 1016		<MDL	1.4	2.79	ug/Kg		<MDL	2.3	4.72	ug/Kg		<MDL	1.3	2.71	ug/Kg
Aroclor 1221		<MDL	2.8	5.57	ug/Kg		<MDL	4.8	9.41	ug/Kg		<MDL	2.8	5.4	ug/Kg
Aroclor 1232		<MDL	2.8	5.57	ug/Kg		<MDL	4.8	9.41	ug/Kg		<MDL	2.8	5.4	ug/Kg
Aroclor 1242		<MDL	1.4	2.79	ug/Kg		<MDL	2.3	4.72	ug/Kg		<MDL	1.3	2.71	ug/Kg
Aroclor 1248		<MDL	1.4	2.79	ug/Kg		<MDL	2.3	4.72	ug/Kg		<MDL	1.3	2.71	ug/Kg
Aroclor 1254		<MDL	1.4	2.79	ug/Kg		<MDL	2.3	4.72	ug/Kg		<MDL	1.3	2.71	ug/Kg
Aroclor 1260		<MDL	1.4	2.79	ug/Kg		<MDL	2.3	4.72	ug/Kg		<MDL	1.3	2.71	ug/Kg

King County Environmental Lab Analytical Report

Project:	421240C	421240C	421240C
Locator:	X322	BB322	E322
Descrip:	NEWAUKUM CREEK NEA	SE 392ND ST	NEWAUKUM CREEK AT
Sample:	L48629-1	L48629-2	L48629-3
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/10/09 11:10	8/10/09 9:50	8/10/09 12:10
TimeSpan:			
TotalSolid:	59.8	35.4	61.7
ClientLoc:			
SampDepth:			
	DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
Total Aroclors		<MDL	1.4	2.79	ug/Kg		<MDL	2.3	4.72	ug/Kg		<MDL	1.3	2.71	ug/Kg
OR SW846 3550B*SW846 8270D															
1,2,4-Trichlorobenzene		<MDL	0.17	0.334	ug/Kg		<MDL	0.28	0.565	ug/Kg		<MDL	0.16	0.324	ug/Kg
1,2-Dichlorobenzene		<MDL	0.33	0.669	ug/Kg		<MDL	0.56	1.13	ug/Kg		<MDL	0.32	0.648	ug/Kg
1,2-Diphenylhydrazine		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
1,3-Dichlorobenzene		<MDL	0.33	0.669	ug/Kg		<MDL	0.56	1.13	ug/Kg		<MDL	0.32	0.648	ug/Kg
1,4-Dichlorobenzene		<MDL	0.33	0.669	ug/Kg		<MDL	0.56	1.13	ug/Kg		<MDL	0.32	0.648	ug/Kg
2,4,5-Trichlorophenol		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
2,4,6-Trichlorophenol		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
2,4-Dichlorophenol		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
2,4-Dimethylphenol		<MDL	1.7	3.34	ug/Kg		<MDL	2.8	5.65	ug/Kg		<MDL	1.6	3.24	ug/Kg
2,4-Dinitrotoluene		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
2,6-Dinitrotoluene		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
2-Chloronaphthalene		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
2-Chlorophenol		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
2-Methylnaphthalene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
2-Methylphenol		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
2-Nitrophenol		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
4-Bromophenyl Phenyl Ether		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
4-Chlorophenyl Phenyl Ether		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
4-Methylphenol		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Acenaphthene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Acenaphthylene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Aniline		<MDL	67	134	ug/Kg		<MDL	110	226	ug/Kg		<MDL	65	130	ug/Kg
Anthracene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Benzo(a)anthracene		<MDL	3.3	6.69	ug/Kg	7.9	<RDL	5.6	11.3	ug/Kg	3.7	<RDL	3.2	6.48	ug/Kg
Benzo(a)pyrene		<MDL	3.3	6.69	ug/Kg	9	<RDL	5.6	11.3	ug/Kg	4.9	<RDL	3.2	6.48	ug/Kg
Benzo(b)fluoranthene		<MDL	3.3	6.69	ug/Kg	12.7		5.6	11.3	ug/Kg	6.6		3.2	6.48	ug/Kg
Benzo(g,h,i)perylene		<MDL	3.3	6.69	ug/Kg	7.1	<RDL	5.6	11.3	ug/Kg	3.7	<RDL	3.2	6.48	ug/Kg
Benzo(k)fluoranthene		<MDL	3.3	6.69	ug/Kg	10	<RDL	5.6	11.3	ug/Kg	6.2	<RDL	3.2	6.48	ug/Kg
Benzoic Acid	174		17	33.4	ug/Kg	387		28	56.5	ug/Kg	175		16	32.4	ug/Kg
Benzyl Alcohol		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Benzyl Butyl Phthalate		<MDL	6.7	13.4	ug/Kg	116		11	22.6	ug/Kg	61.9		6.5	13	ug/Kg
Bis(2-Chloroethoxy)Methane		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Bis(2-Chloroethyl)Ether		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Bis(2-Chloroisopropyl)Ether		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Bis(2-ethylhexyl)adipate	17	<RDL	17	33.4	ug/Kg	34	<RDL	28	56.5	ug/Kg	18	<RDL	16	32.4	ug/Kg
Bis(2-Ethylhexyl)Phthalate	51.7	B	6.7	13.4	ug/Kg	101	B	11	22.6	ug/Kg	63.5	B	6.5	13	ug/Kg
Bisphenol A		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
Caffeine		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Carbazole		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Chrysene		<MDL	3.3	6.69	ug/Kg	9.6	<RDL	5.6	11.3	ug/Kg	5.2	<RDL	3.2	6.48	ug/Kg
Coprostanol		<MDL	67	134	ug/Kg		<MDL	110	226	ug/Kg		<MDL	65	130	ug/Kg
Dibenzo(a,h)anthracene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Dibenzofuran		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Diethyl Phthalate	7	<RDL	6.7	13.4	ug/Kg	12	<RDL	11	22.6	ug/Kg	6.6	<RDL	6.5	13	ug/Kg
Dimethyl Phthalate		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Di-N-Butyl Phthalate	9.9	<RDL,B	6.7	13.4	ug/Kg	18	<RDL,B	11	22.6	ug/Kg	8.6	<RDL,B	6.5	13	ug/Kg
Di-N-Octyl Phthalate		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Fluoranthene		<MDL	3.3	6.69	ug/Kg	12.5		5.6	11.3	ug/Kg	7.73		3.2	6.48	ug/Kg
Fluorene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Hexachlorobenzene		<MDL	0.17	0.334	ug/Kg		<MDL	0.28	0.565	ug/Kg		<MDL	0.16	0.324	ug/Kg
Hexachlorobutadiene		<MDL	0.84	1.67	ug/Kg		<MDL	1.4	2.82	ug/Kg		<MDL	0.81	1.62	ug/Kg
Hexachloroethane		<MDL	1.7	3.34	ug/Kg		<MDL	2.8	5.65	ug/Kg		<MDL	1.6	3.24	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL	3.3	6.69	ug/Kg	7.6	<RDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Isophorone		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
Naphthalene		<MDL	3.3	6.69	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.2	6.48	ug/Kg
Nitrobenzene		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
N-Nitrosodimethylamine		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
N-Nitrosodi-N-Propylamine		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
N-Nitrosodiphenylamine		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Pentachlorophenol		<MDL	17	33.4	ug/Kg		<MDL	28	56.5	ug/Kg		<MDL	16	32.4	ug/Kg
Phenanthrene		<MDL	3.3	6.69	ug/Kg	5.9	<RDL	5.6	11.3	ug/Kg	4.7	<RDL	3.2	6.48	ug/Kg
Phenol		<MDL	6.7	13.4	ug/Kg		<MDL	11	22.6	ug/Kg		<MDL	6.5	13	ug/Kg
Pyrene		<MDL	3.3	6.69	ug/Kg	14.9		5.6	11.3	ug/Kg	8.15		3.2	6.48	ug/Kg
Total 4-Nonylphenol		<MDL	33	66.9	ug/Kg		<MDL	56	113	ug/Kg		<MDL	32	64.8	ug/Kg
OR TERNS (2002)															
Estradiol		<MDL	0.084	0.843	ug/Kg		<MDL	0.14	1.42	ug/Kg		<MDL	0.081	0.817	ug/Kg
Estrone		<MDL	0.05	0.505	ug/Kg	0.1	<RDL	0.085	0.853	ug/Kg	0.12	<RDL	0.049	0.489	ug/Kg
Ethynyl estradiol		<MDL	0.084	0.843	ug/Kg		<MDL	0.14	1.42	ug/Kg		<MDL	0.081	0.817	ug/Kg
OR WDOE NWTPH-DX															
Diesel Range (>C12-C24)		<MDL	42	42	mg/Kg										
Lube Oil Range (>C24)		<MDL	42	42	mg/Kg	100		71	71	mg/Kg	50		41	41	mg/Kg

* Not converted to dry weight basis

King County Environmental Lab Analytical Report

Project:	421240C	421240C	421240C
Locator:	F322	FF322	AD322
Descrip:	NEWAUKUM SAMPLE OF	NEWAUKUM-424TH SE	US NEWAUKUM CR. @
Sample:	L48629-4	L48629-5	L48629-6
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/10/09 12:40	8/10/09 13:00	8/10/09 13:22
TimeSpan:			
TotalSolid:	30.2	59.9	27.5
ClientLoc:			
SampDepth:			
	DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
CV ASTM D422															
Clay*	7.3	J	1.8	3.65	%		<MDL	1.3	2.54	%		<MDL	1.7	3.46	%
Fines*	40.1	J	1.8	3.65	%	7.6		1.3	2.54	%	31.1		1.7	3.46	%
Gravel*	31.7	J	0.36	3.65	%	22.9		0.25	2.54	%	12.1		0.35	3.46	%
p+0.00*	11.5	J	0.36	3.65	%	9.1		0.25	2.54	%	6.2		0.35	3.46	%
p+1.00*	22.7	J	0.36	3.65	%	35		0.25	2.54	%	7.3		0.35	3.46	%
p+10.0(equal/more than)*	7.3	J	1.8	3.65	%		<MDL	1.3	2.54	%		<MDL	1.7	3.46	%
p+2.00*	18.2	J	0.36	3.65	%	26.3		0.25	2.54	%	13.3		0.35	3.46	%
p+3.00*	7.5	J	0.36	3.65	%	4.3		0.25	2.54	%	16.6		0.35	3.46	%
p+4.00*	8.3	J	0.36	3.65	%	2.6		0.25	2.54	%	8.1		0.35	3.46	%
p+5.00*	25.5	J	1.8	3.65	%	5.1		1.3	2.54	%	22.5		1.7	3.46	%
p+6.00*	3.6	J	1.8	3.65	%		<MDL	1.3	2.54	%	1.7		1.7	3.46	%
p+7.00*	3.6	J	1.8	3.65	%	2.5		1.3	2.54	%	6.9		1.7	3.46	%
p+8.00*		<MDL,J	1.8	3.65	%		<MDL	1.3	2.54	%		<MDL	1.7	3.46	%
p+9.00*		<MDL,J	1.8	3.65	%		<MDL	1.3	2.54	%		<MDL	1.7	3.46	%
p-1.00*	8.8	J	0.36	3.65	%	8.1		0.25	2.54	%	4.5		0.35	3.46	%
p-2.00(less than)*	20	J	0.36	3.65	%	11.3		0.25	2.54	%	5.8		0.35	3.46	%
p-2.00*	2.9	J	0.36	3.65	%	3.5		0.25	2.54	%	1.8		0.35	3.46	%
Sand*	68.3	J	0.36	3.65	%	77.3		0.25	2.54	%	51.6		0.35	3.46	%
Silt*	32.8	J	1.8	3.65	%	7.6		1.3	2.54	%	31.1		1.7	3.46	%
CV EPA DEC 1991															
Sulfide, Acid Volatile	0.86	<RDL,JG	0.83	3.3	mg/Kg	16.6	JG	0.42	1.66	mg/Kg		<MDL,JG	0.91	3.64	mg/Kg
CV KEROUEL & AMINOT 1997(KCL)															
Ammonia Nitrogen	53.6		0.83	1.65	mg/Kg	21.2		0.83	1.66	mg/Kg	24.8		0.91	1.79	mg/Kg
CV SM2540-G															
Total Solids*	30.2		0.005	0.01	%	59.9		0.005	0.01	%	27.5		0.005	0.01	%
CV SM4500-P-F OL															
Orthophosphate Phosphorus	53.6		3.2	8.08	mg/Kg	23.4		1.6	4.04	mg/Kg	65.1		3.6	9.05	mg/Kg
CV SW846 9045C															
pH*	7.05				pH	7.06				pH	7				pH
CV SW846 9060-PSEP96															
Total Organic Carbon	41700		6000	11700	mg/Kg	10400		2300	4510	mg/Kg	54900		5100	10400	mg/Kg
MT EPA 200.7															
Arsenic, Extractable, SEM		<MDL	1.7	8.28	mg/Kg		<MDL	0.83	4.14	mg/Kg	2.4	<RDL	1.8	9.13	mg/Kg
Cadmium, Extractable, SEM	0.16	<RDL	0.13	0.662	mg/Kg	0.12	<RDL	0.067	0.331	mg/Kg	0.24	<RDL	0.15	0.727	mg/Kg
Chromium, Extractable, SEM	1.43		0.2	0.993	mg/Kg	0.726		0.1	0.497	mg/Kg	1.72		0.22	1.09	mg/Kg
Copper, Extractable, SEM	5.1		0.26	1.32	mg/Kg	4.27		0.13	0.663	mg/Kg	12.4		0.29	1.46	mg/Kg
Lead, Extractable, SEM	5	<RDL	1.3	6.62	mg/Kg	3.47		0.67	3.31	mg/Kg	9.6		1.5	7.27	mg/Kg
Nickel, Extractable, SEM	1.5	<RDL	0.33	1.65	mg/Kg	0.985		0.17	0.828	mg/Kg	2.45		0.36	1.82	mg/Kg
Silver, Extractable, SEM		<MDL	0.26	1.32	mg/Kg		<MDL	0.13	0.663	mg/Kg		<MDL	0.29	1.46	mg/Kg
Zinc, Extractable, SEM	41.4		0.33	1.65	mg/Kg	21		0.17	0.828	mg/Kg	48.4		0.36	1.82	mg/Kg
MT EPA 245.1*SW846 7470A															
Mercury, Extractable, SEM		<MDL	0.0033	0.00993	mg/Kg		<MDL	0.0017	0.00497	mg/Kg	0.0036	<RDL	0.0036	0.0109	mg/Kg
MT SW846 3050B*SW846 6020A															
Arsenic, Total, ICP-MS	4.93		0.043	0.21	mg/Kg	3.14		0.02	0.103	mg/Kg	5.78		0.044	0.222	mg/Kg
Cadmium, Total, ICP-MS	0.189		0.021	0.105	mg/Kg	0.0835		0.01	0.0516	mg/Kg	0.197		0.022	0.111	mg/Kg
Chromium, Total, ICP-MS	20.7		0.83	4.21	mg/Kg	9.57		0.42	2.07	mg/Kg	29.4		0.87	4.44	mg/Kg
Copper, Total, ICP-MS	20.2		1.7	8.38	mg/Kg	12.4		0.82	4.12	mg/Kg	32.8		1.8	8.87	mg/Kg
Lead, Total, ICP-MS	9.74		0.043	0.21	mg/Kg	5.34		0.02	0.103	mg/Kg	17.8		0.044	0.222	mg/Kg
Nickel, Total, ICP-MS	12.4		0.43	2.1	mg/Kg	5.88		0.2	1.03	mg/Kg	25.8		0.44	2.22	mg/Kg
Phosphorus, Total, ICP-MS	790	<RDL	430	2100	mg/Kg	380	<RDL	200	1030	mg/Kg	980	<RDL	440	2220	mg/Kg
Silver, Total, ICP-MS	0.089	<RDL	0.021	0.105	mg/Kg	0.038	<RDL	0.01	0.0516	mg/Kg	0.11	<RDL	0.022	0.111	mg/Kg
Zinc, Total, ICP-MS	101		2.1	10.5	mg/Kg	53.1		1	5.16	mg/Kg	120		2.2	11.1	mg/Kg
MT SW846 7471B															
Mercury, Total, CVAA	0.031	<RDL	0.016	0.162	mg/Kg	0.018	<RDL	0.0082	0.082	mg/Kg	0.047	<RDL	0.018	0.179	mg/Kg
OR SW846 3550B*EPA 1614															
DecaBDE-209	0.599	J	0.11	0.221	ug/Kg	0.536	J	0.055	0.111	ug/Kg	1.24	J	0.12	0.243	ug/Kg
HeptaBDE-183		<MDL	0.022	0.044	ug/Kg		<MDL	0.011	0.0222	ug/Kg		<MDL	0.024	0.0484	ug/Kg
HeptaBDE-190		<MDL	0.022	0.044	ug/Kg		<MDL	0.011	0.0222	ug/Kg		<MDL	0.024	0.0484	ug/Kg
HexaBDE-138	0.0467	TA	0.022	0.044	ug/Kg	0.0384	TA	0.011	0.0222	ug/Kg		<MDL,TA	0.024	0.0484	ug/Kg
HexaBDE-153	0.176		0.022	0.044	ug/Kg	0.109		0.011	0.0222	ug/Kg	0.212		0.024	0.0484	ug/Kg
HexaBDE-154	0.043	<RDL	0.022	0.044	ug/Kg	0.0225		0.011	0.0222	ug/Kg	0.106		0.024	0.0484	ug/Kg
PentaBDE-100	0.0493		0.022	0.044	ug/Kg	0.0235		0.011	0.0222	ug/Kg	0.203		0.024	0.0484	ug/Kg
PentaBDE-85		<MDL	0.022	0.044	ug/Kg		<MDL	0.011	0.0222	ug/Kg	0.0731		0.024	0.0484	ug/Kg
PentaBDE-99	0.239		0.022	0.044	ug/Kg	0.101	B3	0.011	0.0222	ug/Kg	1.11		0.024	0.0484	ug/Kg
TetraBDE-47	0.265	B3	0.022	0.044	ug/Kg	0.128	B3	0.011	0.0222	ug/Kg	0.902		0.024	0.0484	ug/Kg
TetraBDE-66		<MDL	0.022	0.044	ug/Kg	0.0865		0.011	0.0222	ug/Kg	0.214		0.024	0.0484	ug/Kg
TetraBDE-71	0.032	<RDL,TA	0.022	0.044	ug/Kg		<MDL,TA	0.011	0.0222	ug/Kg	0.112	TA	0.024	0.0484	ug/Kg
TriBDE-17		<MDL	0.022	0.044	ug/Kg		<MDL	0.011	0.0222	ug/Kg		<MDL	0.024	0.0484	ug/Kg
TriBDE-28		<MDL,TA	0.022	0.044	ug/Kg		<MDL,TA	0.011	0.0222	ug/Kg		<MDL,TA	0.024	0.0484	ug/Kg
OR SW846 3550B*SW846 8081B															
4,4'-DDD		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
4,4'-DDE		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
4,4'-DDT		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg	4.7	<RDL	2.4	4.84	ug/Kg
Aldrin		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Alpha-BHC		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Alpha-Chlordane		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Beta-BHC		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Delta-BHC		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Dieldrin		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Endosulfan I		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Endosulfan II		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Endosulfan Sulfate		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Endrin		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Endrin Aldehyde		<MDL	2.2	4.4	ug/Kg		<MDL	1.1	2.22	ug/Kg		<MDL	2.4	4.84	ug/Kg
Gamma-BHC (Lindane)		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Gamma-Chlordane		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Heptachlor		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Heptachlor Epoxide		<MDL	1.1	2.21	ug/Kg		<MDL	0.55	1.11	ug/Kg		<MDL	1.2	2.43	ug/Kg
Methoxychlor		<MDL	11	22.1	ug/Kg		<MDL	5.5	11.1	ug/Kg		<MDL	12	24.3	ug/Kg
Toxaphene		<MDL	22	44	ug/Kg		<MDL	11	22.2	ug/Kg		<MDL	24	48.4	ug/Kg
OR SW846 3550B*SW846 8082A															
Aroclor 1016		<MDL	2.7	5.53	ug/Kg		<MDL	1.4	2.79	ug/Kg		<MDL	3	6.07	ug/Kg
Aroclor 1221		<MDL	5.6	11	ug/Kg		<MDL	2.8	5.56	ug/Kg		<MDL	6.2	12.1	ug/Kg
Aroclor 1232		<MDL	5.6	11	ug/Kg		<MDL	2.8	5.56	ug/Kg		<MDL	6.2	12.1	ug/Kg
Aroclor 1242		<MDL	2.7	5.53	ug/Kg		<MDL	1.4	2.79	ug/Kg		<MDL	3	6.07	ug/Kg
Aroclor 1248		<MDL	2.7	5.53	ug/Kg		<MDL	1.4	2.79	ug/Kg		<MDL	3	6.07	ug/Kg
Aroclor 1254		<MDL	2.7	5.53	ug/Kg		<MDL	1.4	2.79	ug/Kg		<MDL	3	6.07	ug/Kg
Aroclor 1260		<MDL	2.7	5.53	ug/Kg		<MDL	1.4	2.79	ug/Kg		<MDL	3	6.07	ug/Kg

King County Environmental Lab Analytical Report

Project:	421240C					Project:	421240C					Project:	421240C			
Locator:	F322					Locator:	FF322					Locator:	AD322			
Descrip:	NEWAUKUM SAMPLE OF					Descrip:	NEWAUKUM-424TH SE					Descrip:	US NEWAUKUM CR. @			
Sample:	L48629-4					Sample:	L48629-5					Sample:	L48629-6			
Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED			
ColDate:	8/10/09 12:40					ColDate:	8/10/09 13:00					ColDate:	8/10/09 13:22			
TimeSpan:						TimeSpan:						TimeSpan:				
TotalSolid:	30.2					TotalSolid:	59.9					TotalSolid:	27.5			
ClientLoc:						ClientLoc:						ClientLoc:				
SampDepth:						SampDepth:						SampDepth:				
DRY Weight Basis						**DRY Weight Basis**						**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
Total Aroclors		<MDL	2.7	5.53	ug/Kg		<MDL	1.4	2.79	ug/Kg		<MDL	3	6.07	ug/Kg
OR SW846 3550B*SW846 8270D															
1,2,4-Trichlorobenzene		<MDL	0.33	0.662	ug/Kg		<MDL	0.17	0.334	ug/Kg		<MDL	0.36	0.727	ug/Kg
1,2-Dichlorobenzene		<MDL	0.66	1.32	ug/Kg		<MDL	0.33	0.668	ug/Kg		<MDL	0.73	1.45	ug/Kg
1,2-Diphenylhydrazine		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
1,3-Dichlorobenzene		<MDL	0.66	1.32	ug/Kg		<MDL	0.33	0.668	ug/Kg		<MDL	0.73	1.45	ug/Kg
1,4-Dichlorobenzene		<MDL	0.66	1.32	ug/Kg		<MDL	0.33	0.668	ug/Kg		<MDL	0.73	1.45	ug/Kg
2,4,5-Trichlorophenol		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg		<MDL	36	72.7	ug/Kg
2,4,6-Trichlorophenol		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg		<MDL	36	72.7	ug/Kg
2,4-Dichlorophenol		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
2,4-Dimethylphenol		<MDL	3.3	6.62	ug/Kg		<MDL	1.7	3.34	ug/Kg		<MDL	3.6	7.27	ug/Kg
2,4-Dinitrotoluene		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
2,6-Dinitrotoluene		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg		<MDL	36	72.7	ug/Kg
2-Chloronaphthalene		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
2-Chlorophenol		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
2-Methylnaphthalene		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
2-Methylphenol		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
2-Nitrophenol		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg		<MDL	36	72.7	ug/Kg
4-Bromophenyl Phenyl Ether		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
4-Chlorophenyl Phenyl Ether		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
4-Methylphenol		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Acenaphthene		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
Acenaphthylene		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
Aniline		<MDL	130	265	ug/Kg		<MDL	67	134	ug/Kg		<MDL	150	291	ug/Kg
Anthracene	11	<RDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg	17		7.3	14.5	ug/Kg
Benzo(a)anthracene	17.7		6.6	13.2	ug/Kg	4.7	<RDL	3.3	6.68	ug/Kg	54.5		7.3	14.5	ug/Kg
Benzo(a)pyrene	17.7		6.6	13.2	ug/Kg	4.8	<RDL	3.3	6.68	ug/Kg	62.9		7.3	14.5	ug/Kg
Benzo(b)fluoranthene	25		6.6	13.2	ug/Kg	7.75		3.3	6.68	ug/Kg	93.5		7.3	14.5	ug/Kg
Benzo(g,h,i)perylene	9.9	<RDL	6.6	13.2	ug/Kg	3.5	<RDL	3.3	6.68	ug/Kg	45.5		7.3	14.5	ug/Kg
Benzo(k)fluoranthene	17.7		6.6	13.2	ug/Kg	5.8	<RDL	3.3	6.68	ug/Kg	61.8		7.3	14.5	ug/Kg
Benzoic Acid	579		33	66.2	ug/Kg	204		17	33.4	ug/Kg	727		36	72.7	ug/Kg
Benzyl Alcohol		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
Benzyl Butyl Phthalate		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg	95.6		15	29.1	ug/Kg
Bis(2-Chloroethoxy)Methane		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Bis(2-Chloroethyl)Ether		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Bis(2-Chloroisopropyl)Ether		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Bis(2-ethylhexyl)adipate	43	<RDL	33	66.2	ug/Kg	33.6		17	33.4	ug/Kg	98.9		36	72.7	ug/Kg
Bis(2-Ethylhexyl)Phthalate	125	B	13	26.5	ug/Kg	58.9	B	6.7	13.4	ug/Kg	418	B	15	29.1	ug/Kg
Bisphenol A		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg	148		36	72.7	ug/Kg
Caffeine		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Carbazole		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg	10	<RDL	7.3	14.5	ug/Kg
Chrysene	36.4		6.6	13.2	ug/Kg	8.78		3.3	6.68	ug/Kg	86.9		7.3	14.5	ug/Kg
Coprostanol		<MDL	130	265	ug/Kg		<MDL	67	134	ug/Kg		<MDL	150	291	ug/Kg
Dibenzo(a,h)anthracene		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg	15.2		7.3	14.5	ug/Kg
Dibenzofuran		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
Diethyl Phthalate	13	<RDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg	16	<RDL	15	29.1	ug/Kg
Dimethyl Phthalate		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Di-N-Butyl Phthalate	33.8	B	13	26.5	ug/Kg	10	<RDL,B	6.7	13.4	ug/Kg	24	<RDL,B	15	29.1	ug/Kg
Di-N-Octyl Phthalate		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Fluoranthene	31.2		6.6	13.2	ug/Kg	7.31		3.3	6.68	ug/Kg	152		7.3	14.5	ug/Kg
Fluorene		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
Hexachlorobenzene		<MDL	0.33	0.662	ug/Kg		<MDL	0.17	0.334	ug/Kg		<MDL	0.36	0.727	ug/Kg
Hexachlorobutadiene		<MDL	1.7	3.31	ug/Kg		<MDL	0.83	1.67	ug/Kg		<MDL	1.8	3.64	ug/Kg
Hexachloroethane		<MDL	3.3	6.62	ug/Kg		<MDL	1.7	3.34	ug/Kg		<MDL	3.6	7.27	ug/Kg
Indeno(1,2,3-Cd)Pyrene	11	<RDL	6.6	13.2	ug/Kg	3.5	<RDL	3.3	6.68	ug/Kg	42.2		7.3	14.5	ug/Kg
Isophorone		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg		<MDL	36	72.7	ug/Kg
Naphthalene		<MDL	6.6	13.2	ug/Kg		<MDL	3.3	6.68	ug/Kg		<MDL	7.3	14.5	ug/Kg
Nitrobenzene		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
N-Nitrosodimethylamine		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
N-Nitrosodi-N-Propylamine		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
N-Nitrosodiphenylamine		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Pentachlorophenol		<MDL	33	66.2	ug/Kg		<MDL	17	33.4	ug/Kg	47	<RDL	36	72.7	ug/Kg
Phenanthrene	16.9		6.6	13.2	ug/Kg	3.5	<RDL	3.3	6.68	ug/Kg	101		7.3	14.5	ug/Kg
Phenol		<MDL	13	26.5	ug/Kg		<MDL	6.7	13.4	ug/Kg		<MDL	15	29.1	ug/Kg
Pyrene	36.1		6.6	13.2	ug/Kg	7.78		3.3	6.68	ug/Kg	169		7.3	14.5	ug/Kg
Total 4-Nonylphenol		<MDL	66	132	ug/Kg		<MDL	33	66.8	ug/Kg	343		73	145	ug/Kg
OR TERNS (2002)															
Estradiol		<MDL	0.17	1.67	ug/Kg		<MDL	0.083	0.841	ug/Kg		<MDL	0.18	1.83	ug/Kg
Estrone		<MDL	0.099	1	ug/Kg	0.11	<RDL	0.05	0.504	ug/Kg	0.2	<RDL	0.11	1.1	ug/Kg
Ethynyl estradiol		<MDL	0.17	1.67	ug/Kg		<MDL	0.083	0.841	ug/Kg		<MDL	0.18	1.83	ug/Kg
OR WDOE NWTPH-DX															
Diesel Range (>C12-C24)															
Lube Oil Range (>C24)	120		83	83	mg/Kg	45		42	42	mg/Kg	200		91	91	mg/Kg
* Not converted to dry weight basis															

King County Environmental Lab Analytical Report

	AE322	G322	QQ322
Project:	421240C	421240C	421240C
Locator:	AE322	G322	QQ322
Descrip:	DS NEWAUKUM CR. @	NEWAUKUM CREEK AT	SE 416TH -QUARRY
Sample:	L48629-7	L48629-8	L48629-9
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/10/09 13:55	8/10/09 14:25	8/10/09 15:15
TimeSpan:			
TotalSolid:	64.8	41.1	20.6
ClientLoc:			
SampDepth:			
	DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
CV ASTM D422															
Clay*		<MDL	0.71	1.43	%		<MDL	1.2	2.37	%	13.9		2.3	4.65	%
Fines*	2.9		0.71	1.43	%	23.7		1.2	2.37	%	46.5		2.3	4.65	%
Gravel*	42		0.14	1.43	%	2.1		0.24	2.37	%	0.9	<RDL	0.46	4.65	%
p+0.00*	17.5		0.14	1.43	%	3.1		0.24	2.37	%	2.6		0.46	4.65	%
p+1.00*	16.9		0.14	1.43	%	5.9		0.24	2.37	%	5.9		0.46	4.65	%
p+10.0(equal/more than)*		<MDL	0.71	1.43	%		<MDL	1.2	2.37	%	9.3		2.3	4.65	%
p+2.00*	9.3		0.14	1.43	%	18.9		0.24	2.37	%	8.3		0.46	4.65	%
p+3.00*	3.4		0.14	1.43	%	26.1		0.24	2.37	%	14.9		0.46	4.65	%
p+4.00*	1.4		0.14	1.43	%	11.9		0.24	2.37	%	11.2		0.46	4.65	%
p+5.00*		<MDL	0.71	1.43	%	18.9		1.2	2.37	%	23.2		2.3	4.65	%
p+6.00*	1.4		0.71	1.43	%	2.4		1.2	2.37	%	4.6		2.3	4.65	%
p+7.00*		<MDL	0.71	1.43	%		<MDL	1.2	2.37	%	4.6		2.3	4.65	%
p+8.00*	1.4		0.71	1.43	%	2.4		1.2	2.37	%		<MDL	2.3	4.65	%
p+9.00*		<MDL	0.71	1.43	%		<MDL	1.2	2.37	%	4.6		2.3	4.65	%
p-1.00*	14.4		0.14	1.43	%	1.1		0.24	2.37	%	0.9	<RDL	0.46	4.65	%
p-2.00(less than)*	24.4		0.14	1.43	%	1.1		0.24	2.37	%		<MDL	0.46	4.65	%
p-2.00*	3.2		0.14	1.43	%		<MDL	0.24	2.37	%		<MDL	0.46	4.65	%
Sand*	48.5		0.14	1.43	%	65.9		0.24	2.37	%	42.9		0.46	4.65	%
Silt*	2.9		0.71	1.43	%	23.7		1.2	2.37	%	32.5		2.3	4.65	%
CV EPA DEC 1991															
Sulfide, Acid Volatile		<MDL,JG	0.39	1.54	mg/Kg		<MDL,JG	0.61	2.43	mg/Kg	17.6	JG	1.2	4.85	mg/Kg
CV KEROUEL & AMINOT 1997(KCL)															
Ammonia Nitrogen	11.3		0.39	0.765	mg/Kg	23.2		0.58	1.19	mg/Kg	60.7		1.2	2.35	mg/Kg
CV SM2540-G															
Total Solids*	64.8		0.005	0.01	%	41.1		0.005	0.01	%	20.6		0.005	0.01	%
CV SM4500-P-F OL															
Orthophosphate Phosphorus	17.9		1.5	3.84	mg/Kg	39.9		2.3	5.79	mg/Kg	82.5		4.8	11.8	mg/Kg
CV SW846 9045C															
pH*	6.9				pH	6.83				pH	7.07				pH
CV SW846 9060-PSEP96															
Total Organic Carbon	10700		1900	3700	mg/Kg	23000		2700	5470	mg/Kg	82000		6800	13600	mg/Kg
MT EPA 200.7															
Arsenic, Extractable, SEM		<MDL	0.77	3.86	mg/Kg		<MDL	1.2	6.06	mg/Kg	2.8	<RDL	2.4	12.2	mg/Kg
Cadmium, Extractable, SEM		<MDL	0.062	0.309	mg/Kg	0.13	<RDL	0.097	0.487	mg/Kg	0.28	<RDL	0.19	0.971	mg/Kg
Chromium, Extractable, SEM	0.497		0.093	0.465	mg/Kg	1.09		0.15	0.727	mg/Kg	2		0.29	1.46	mg/Kg
Copper, Extractable, SEM	2.15		0.12	0.619	mg/Kg	5.6		0.19	0.971	mg/Kg	15.8		0.39	1.95	mg/Kg
Lead, Extractable, SEM	2.2	<RDL	0.62	3.09	mg/Kg	4.4	<RDL	0.97	4.87	mg/Kg	6.8	<RDL	1.9	9.71	mg/Kg
Nickel, Extractable, SEM	0.65	<RDL	0.15	0.773	mg/Kg	1.1	<RDL	0.24	1.21	mg/Kg	2.87		0.49	2.43	mg/Kg
Silver, Extractable, SEM		<MDL	0.12	0.619	mg/Kg		<MDL	0.97	4.87	mg/Kg		<MDL	0.39	1.95	mg/Kg
Zinc, Extractable, SEM	17.3		0.15	0.773	mg/Kg	29		0.24	1.21	mg/Kg	54.4		0.49	2.43	mg/Kg
MT EPA 245.1*SW846 7470A															
Mercury, Extractable, SEM		<MDL	0.0015	0.00465	mg/Kg		<MDL	0.0024	0.00727	mg/Kg		<MDL	0.0049	0.0146	mg/Kg
MT SW846 3050B*SW846 6020A															
Arsenic, Total, ICP-MS	3.04		0.019	0.0954	mg/Kg	4.38		0.029	0.152	mg/Kg	7.33		0.058	0.299	mg/Kg
Cadmium, Total, ICP-MS	0.0878		0.0096	0.0477	mg/Kg	0.162		0.015	0.0757	mg/Kg	0.278		0.03	0.15	mg/Kg
Chromium, Total, ICP-MS	14.5	J	0.39	1.91	mg/Kg	17.1		0.61	3.04	mg/Kg	23.1		1.2	5.97	mg/Kg
Copper, Total, ICP-MS	13.1		0.76	3.81	mg/Kg	20.7		1.2	6.06	mg/Kg	37		2.4	11.9	mg/Kg
Lead, Total, ICP-MS	5.63		0.019	0.0954	mg/Kg	10		0.029	0.152	mg/Kg	12.5		0.058	0.299	mg/Kg
Nickel, Total, ICP-MS	8.43		0.19	0.954	mg/Kg	10.1		0.29	1.52	mg/Kg	13.8		0.58	2.99	mg/Kg
Phosphorus, Total, ICP-MS	480	<RDL	190	954	mg/Kg	560	<RDL	290	1520	mg/Kg	730	<RDL	580	2990	mg/Kg
Silver, Total, ICP-MS	0.043	<RDL	0.0096	0.0477	mg/Kg	0.0849		0.015	0.0757	mg/Kg	0.14	<RDL	0.03	0.15	mg/Kg
Zinc, Total, ICP-MS	60.6		0.96	4.77	mg/Kg	84.9		1.5	7.57	mg/Kg	126		3	15	mg/Kg
MT SW846 7471B															
Mercury, Total, CVAA	0.015	<RDL	0.0076	0.0756	mg/Kg	0.036	<RDL	0.012	0.117	mg/Kg	0.073	<RDL	0.024	0.241	mg/Kg
OR SW846 3550B*EPA 1614															
DecaBDE-209	0.182	J	0.051	0.103	ug/Kg	0.309	J	0.08	0.162	ug/Kg	0.675	J	0.16	0.324	ug/Kg
HeptaBDE-183		<MDL	0.01	0.0205	ug/Kg		<MDL	0.016	0.0324	ug/Kg		<MDL	0.033	0.0646	ug/Kg
HeptaBDE-190		<MDL	0.01	0.0205	ug/Kg		<MDL	0.016	0.0324	ug/Kg		<MDL	0.033	0.0646	ug/Kg
HexaBDE-138	0.0261	TA	0.01	0.0205	ug/Kg	0.029	<RDL,TA	0.016	0.0324	ug/Kg		<MDL,TA	0.033	0.0646	ug/Kg
HexaBDE-153	0.0753		0.01	0.0205	ug/Kg	0.141		0.016	0.0324	ug/Kg	0.22		0.033	0.0646	ug/Kg
HexaBDE-154	0.019	<RDL	0.01	0.0205	ug/Kg	0.029	<RDL	0.016	0.0324	ug/Kg	0.046	<RDL	0.033	0.0646	ug/Kg
PentaBDE-100	0.017	<RDL	0.01	0.0205	ug/Kg	0.024	<RDL	0.016	0.0324	ug/Kg	0.049	<RDL	0.033	0.0646	ug/Kg
PentaBDE-85		<MDL	0.01	0.0205	ug/Kg		<MDL	0.016	0.0324	ug/Kg		<MDL	0.033	0.0646	ug/Kg
PentaBDE-99	0.0651	B3	0.01	0.0205	ug/Kg	0.0827	B3	0.016	0.0324	ug/Kg	0.213	B3	0.033	0.0646	ug/Kg
TetraBDE-47	0.0991	B3	0.01	0.0205	ug/Kg	0.117		0.016	0.0324	ug/Kg	0.246	B3	0.033	0.0646	ug/Kg
TetraBDE-66		<MDL	0.01	0.0205	ug/Kg		<MDL	0.016	0.0324	ug/Kg		<MDL	0.033	0.0646	ug/Kg
TetraBDE-71		<MDL,TA	0.01	0.0205	ug/Kg		<MDL,TA	0.016	0.0324	ug/Kg		<MDL,TA	0.033	0.0646	ug/Kg
TriBDE-17		<MDL	0.01	0.0205	ug/Kg		<MDL	0.016	0.0324	ug/Kg		<MDL	0.033	0.0646	ug/Kg
TriBDE-28		<MDL,TA	0.01	0.0205	ug/Kg		<MDL,TA	0.016	0.0324	ug/Kg		<MDL,TA	0.033	0.0646	ug/Kg
OR SW846 3550B*SW846 8081B															
4,4'-DDD		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
4,4'-DDE		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
4,4'-DDT		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Aldrin		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Alpha-BHC		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Alpha-Chlordane		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Beta-BHC		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Delta-BHC		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Dieldrin		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Endosulfan I		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Endosulfan II		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Endosulfan Sulfate		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Endrin		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Endrin Aldehyde		<MDL	1	2.05	ug/Kg		<MDL	1.6	3.24	ug/Kg		<MDL	3.3	6.46	ug/Kg
Gamma-BHC (Lindane)		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Gamma-Chlordane		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Heptachlor		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Heptachlor Epoxide		<MDL	0.51	1.03	ug/Kg		<MDL	0.8	1.62	ug/Kg		<MDL	1.6	3.24	ug/Kg
Methoxychlor		<MDL	5.1	10.3	ug/Kg		<MDL	8	16.2	ug/Kg		<MDL	16	32.4	ug/Kg
Toxaphene		<MDL	10	20.5	ug/Kg		<MDL	16	32.4	ug/Kg		<MDL	33	64.6	ug/Kg
OR SW846 3550B*SW846 8082A															
Aroclor 1016		<MDL	1.3	2.58	ug/Kg		<MDL	2	4.06	ug/Kg		<MDL	4	8.11	ug/Kg
Aroclor 1221		<MDL	2.6	5.14	ug/Kg		<MDL	4.1	8.1	ug/Kg		<MDL	8.3	16.2	ug/Kg
Aroclor 1232		<MDL	2.6	5.14	ug/Kg		<MDL	4.1	8.1	ug/Kg		<MDL	8.3	16.2	ug/Kg
Aroclor 1242		<MDL	1.3	2.58	ug/Kg		<MDL	2	4.06	ug/Kg		<MDL	4	8.11	ug/Kg
Aroclor 1248		<MDL	1.3	2.58	ug/Kg		<MDL	2	4.06	ug/Kg		<MDL	4	8.11	ug/Kg
Aroclor 1254		<MDL	1.3	2.58	ug/Kg		<MDL	2	4.06	ug/Kg		<MDL	4	8.11	ug/Kg
Aroclor 1260		<MDL	1.3	2.58	ug/Kg		<MDL	2	4.06	ug/Kg		<MDL	4	8.11	ug/Kg

King County Environmental Lab Analytical Report

Project:	421240C					Project:	421240C					Project:	421240C			
Locator:	AE322					Locator:	G322					Locator:	QQ322			
Descrip:	DS NEWAUKUM CR. @					Descrip:	NEWAUKUM CREEK AT					Descrip:	SE 416TH -QUARRY			
Sample:	L48629-7					Sample:	L48629-8					Sample:	L48629-9			
Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED			
ColDate:	8/10/09 13:55					ColDate:	8/10/09 14:25					ColDate:	8/10/09 15:15			
TimeSpan:						TimeSpan:						TimeSpan:				
TotalSolid:	64.8					TotalSolid:	41.1					TotalSolid:	20.6			
ClientLoc:						ClientLoc:						ClientLoc:				
SampDepth:						SampDepth:						SampDepth:				
DRY Weight Basis						**DRY Weight Basis**						**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
Total Aroclors		<MDL	1.3	2.58	ug/Kg		<MDL	2	4.06	ug/Kg		<MDL	4	8.11	ug/Kg
OR SW846 3550B*SW846 8270D															
1,2,4-Trichlorobenzene		<MDL	0.15	0.309	ug/Kg		<MDL	0.24	0.487	ug/Kg		<MDL	0.49	0.971	ug/Kg
1,2-Dichlorobenzene		<MDL	0.31	0.617	ug/Kg		<MDL	0.49	0.973	ug/Kg		<MDL	0.97	1.94	ug/Kg
1,2-Diphenylhydrazine		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
1,3-Dichlorobenzene		<MDL	0.31	0.617	ug/Kg		<MDL	0.49	0.973	ug/Kg		<MDL	0.97	1.94	ug/Kg
1,4-Dichlorobenzene		<MDL	0.31	0.617	ug/Kg		<MDL	0.49	0.973	ug/Kg		<MDL	0.97	1.94	ug/Kg
2,4,5-Trichlorophenol		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
2,4,6-Trichlorophenol		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
2,4-Dichlorophenol		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
2,4-Dimethylphenol		<MDL	1.5	3.09	ug/Kg		<MDL	2.4	4.87	ug/Kg		<MDL	4.9	9.71	ug/Kg
2,4-Dinitrotoluene		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
2,6-Dinitrotoluene		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
2-Chloronaphthalene		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
2-Chlorophenol		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
2-Methylnaphthalene		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
2-Methylphenol		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
2-Nitrophenol		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
4-Bromophenyl Phenyl Ether		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
4-Chlorophenyl Phenyl Ether		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
4-Methylphenol		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Acenaphthene		<MDL	3.1	6.17	ug/Kg	11.2		4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Acenaphthylene		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Aniline		<MDL	62	123	ug/Kg		<MDL	97	195	ug/Kg		<MDL	190	388	ug/Kg
Anthracene		<MDL	3.1	6.17	ug/Kg	7.5	<RDL	4.9	9.73	ug/Kg	17	<RDL	9.7	19.4	ug/Kg
Benzo(a)anthracene		<MDL	3.1	6.17	ug/Kg	16.9		4.9	9.73	ug/Kg	41.7		9.7	19.4	ug/Kg
Benzo(a)pyrene	3.5	<RDL	3.1	6.17	ug/Kg	12.7		4.9	9.73	ug/Kg	39.9		9.7	19.4	ug/Kg
Benzo(b)fluoranthene	4.5	<RDL	3.1	6.17	ug/Kg	19.6		4.9	9.73	ug/Kg	67.5		9.7	19.4	ug/Kg
Benzo(g,h,i)perylene		<MDL	3.1	6.17	ug/Kg	7.3	<RDL	4.9	9.73	ug/Kg	21.3		9.7	19.4	ug/Kg
Benzo(k)fluoranthene	3.4	<RDL	3.1	6.17	ug/Kg	18.6		4.9	9.73	ug/Kg	68.9		9.7	19.4	ug/Kg
Benzoic Acid	205		15	30.9	ug/Kg	294		24	48.7	ug/Kg	607		49	97.1	ug/Kg
Benzyl Alcohol		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Benzyl Butyl Phthalate		<MDL	6.2	12.3	ug/Kg	57.2		9.7	19.5	ug/Kg	121		19	38.8	ug/Kg
Bis(2-Chloroethoxy)Methane		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Bis(2-Chloroethyl)Ether		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Bis(2-Chloroisopropyl)Ether		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Bis(2-ethylhexyl)adipate	28	<RDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg	98.1		49	97.1	ug/Kg
Bis(2-Ethylhexyl)Phthalate	55.4	B	6.2	12.3	ug/Kg	78.3	B	9.7	19.5	ug/Kg	184	B	19	38.8	ug/Kg
Bisphenol A		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
Caffeine		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Carbazole		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Chrysene	4.3	<RDL	3.1	6.17	ug/Kg	30.4	J	4.9	9.73	ug/Kg	50.5		9.7	19.4	ug/Kg
Coprostanol		<MDL	62	123	ug/Kg		<MDL	97	195	ug/Kg		<MDL	190	388	ug/Kg
Dibenzo(a,h)anthracene		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Dibenzofuran		<MDL	3.1	6.17	ug/Kg	9.2	<RDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Diethyl Phthalate		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Dimethyl Phthalate		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Di-N-Butyl Phthalate	7.7	<RDL,B	6.2	12.3	ug/Kg	15	<RDL,B	9.7	19.5	ug/Kg	39	B	19	38.8	ug/Kg
Di-N-Octyl Phthalate		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Fluoranthene	5.6	<RDL	3.1	6.17	ug/Kg	32.8		4.9	9.73	ug/Kg	97.6		9.7	19.4	ug/Kg
Fluorene		<MDL	3.1	6.17	ug/Kg	18.9		4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Hexachlorobenzene		<MDL	0.15	0.309	ug/Kg		<MDL	0.24	0.487	ug/Kg		<MDL	0.49	0.971	ug/Kg
Hexachlorobutadiene		<MDL	0.77	1.54	ug/Kg		<MDL	1.2	2.43	ug/Kg		<MDL	2.4	4.85	ug/Kg
Hexachloroethane		<MDL	1.5	3.09	ug/Kg		<MDL	2.4	4.87	ug/Kg		<MDL	4.9	9.71	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL	3.1	6.17	ug/Kg	6.8	<RDL	4.9	9.73	ug/Kg	21		9.7	19.4	ug/Kg
Isophorone		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
Naphthalene		<MDL	3.1	6.17	ug/Kg		<MDL	4.9	9.73	ug/Kg		<MDL	9.7	19.4	ug/Kg
Nitrobenzene		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
N-Nitrosodimethylamine		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
N-Nitrosodi-N-Propylamine		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
N-Nitrosodiphenylamine		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Pentachlorophenol		<MDL	15	30.9	ug/Kg		<MDL	24	48.7	ug/Kg		<MDL	49	97.1	ug/Kg
Phenanthrene		<MDL	3.1	6.17	ug/Kg	40.1		4.9	9.73	ug/Kg	27.6		9.7	19.4	ug/Kg
Phenol		<MDL	6.2	12.3	ug/Kg		<MDL	9.7	19.5	ug/Kg		<MDL	19	38.8	ug/Kg
Pyrene	6.48		3.1	6.17	ug/Kg	38.2		4.9	9.73	ug/Kg	95.1		9.7	19.4	ug/Kg
Total 4-Nonylphenol		<MDL	31	61.7	ug/Kg		<MDL	49	97.3	ug/Kg		<MDL	97	194	ug/Kg
OR TERNS (2002)															
Estradiol		<MDL	0.077	0.778	ug/Kg		<MDL	0.12	1.23	ug/Kg		<MDL	0.24	2.45	ug/Kg
Estrone	0.17	<RDL	0.046	0.466	ug/Kg	0.16	<RDL	0.073	0.735	ug/Kg	0.43	<RDL	0.15	1.47	ug/Kg
Ethynyl estradiol		<MDL	0.077	0.778	ug/Kg		<MDL	0.12	1.23	ug/Kg		<MDL	0.24	2.45	ug/Kg
OR WDOE NWTPH-DX															
Diesel Range (>C12-C24)															
Lube Oil Range (>C24)	42		39	39	mg/Kg	72		61	61	mg/Kg	190		120	120	mg/Kg
* Not converted to dry weight basis															

King County Environmental Lab Analytical Report

Project:	421240C					Project:	421240C					Project:	421240C								
Locator:	'0478					Locator:	A434					Locator:	'00631								
Descrip:	LITTLE BEAR CREEK/					Descrip:	THORNTON CREEK//ON					Descrip:	ISSAQUAH CREEK MOU								
Sample:	L48633-1					Sample:	L48633-2					Sample:	L48633-3								
Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED								
ColDate:	8/12/09 12:25					ColDate:	8/12/09 14:15					ColDate:	8/12/09 11:15								
TimeSpan:						TimeSpan:						TimeSpan:									
TotalSolid:	74.3					TotalSolid:	35.5					TotalSolid:	51.9								
ClientLoc:						ClientLoc:						ClientLoc:									
SampDepth:						SampDepth:						SampDepth:									
DRY Weight Basis						**DRY Weight Basis**						**DRY Weight Basis**									
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**		**Value**	**Qual**	**MDL**	**RDL**	**Units**					
CV ASTM D422																					
Clay*		<MDL	0.57	1.15	%	2.5		1.3	2.52	%			<MDL	0.95	1.89	%					
Fines*	1.1		0.57	1.15	%	25.2		1.3	2.52	%		45.4		0.95	1.89	%					
Gravel*	18.6		0.11	1.15	%	1.5		0.25	2.52	%			<MDL	0.19	1.89	%					
p+0.00*	7.7		0.11	1.15	%	1.3		0.25	2.52	%			<MDL	0.19	1.89	%					
p+1.00*	17.1		0.11	1.15	%	1.9		0.25	2.52	%		0.3	<RDL	0.19	1.89	%					
p+10.0(equal/more than)*		<MDL	0.57	1.15	%		<MDL	1.3	2.52	%			<MDL	0.95	1.89	%					
p+2.00*	33.8		0.11	1.15	%	12.3		0.25	2.52	%		1.7		0.19	1.89	%					
p+3.00*	19.4		0.11	1.15	%	36		0.25	2.52	%		21.5		0.19	1.89	%					
p+4.00*	3.1		0.11	1.15	%	18.3		0.25	2.52	%		23.2		0.19	1.89	%					
p+5.00*		<MDL	0.57	1.15	%	17.6		1.3	2.52	%		32.2		0.95	1.89	%					
p+6.00*		<MDL	0.57	1.15	%	2.5		1.3	2.52	%		5.7		0.95	1.89	%					
p+7.00*		<MDL	0.57	1.15	%	2.5		1.3	2.52	%		3.8		0.95	1.89	%					
p+8.00*	1.1		0.57	1.15	%		<MDL	1.3	2.52	%		3.8		0.95	1.89	%					
p+9.00*		<MDL	0.57	1.15	%	2.5		1.3	2.52	%			<MDL	0.95	1.89	%					
p-1.00*	5.5		0.11	1.15	%	0.9	<RDL	0.25	2.52	%			<MDL	0.19	1.89	%					
p-2.00(less than)*	11.6		0.11	1.15	%	0.6	<RDL	0.25	2.52	%			<MDL	0.19	1.89	%					
p-2.00*	1.5		0.11	1.15	%		<MDL	0.25	2.52	%			<MDL	0.19	1.89	%					
Sand*	81		0.11	1.15	%	69.8		0.25	2.52	%		46.8		0.19	1.89	%					
Silt*	1.1		0.57	1.15	%	22.6		1.3	2.52	%		45.4		0.95	1.89	%					
CV EPA DEC 1991																					
Sulfide, Acid Volatile																					
CV KEROUEL & AMINOT 1997(KCL)																					
Ammonia Nitrogen	1.7		0.067	0.135	mg/Kg	45.6		1.4	2.8	mg/Kg		20.6		1.8	3.7	mg/Kg					
CV SM2540-G																					
Total Solids*	74.3		0.005	0.01	%	35.5		0.005	0.01	%		51.9		0.005	0.01	%					
CV SM4500-P-F OL																					
Orthophosphate Phosphorus	6.69		1.3	3.36	mg/Kg	59.7		2.8	7.01	mg/Kg		17.5		1.8	4.59	mg/Kg					
CV SW846 9045C																					
pH*	7.47				pH	7.04				pH		6.96				pH					
CV SW846 9060-PSEP96																					
Total Organic Carbon	2020		480	972	mg/Kg	59200		6800	13400	mg/Kg		18900		1700	3410	mg/Kg					
MT EPA 200.7																					
Arsenic, Extractable, SEM																					
Cadmium, Extractable, SEM																					
Chromium, Extractable, SEM																					
Copper, Extractable, SEM																					
Lead, Extractable, SEM																					
Nickel, Extractable, SEM																					
Silver, Extractable, SEM																					
Zinc, Extractable, SEM																					
MT EPA 245.1*SW846 7470A																					
Mercury, Extractable, SEM																					
MT SW846 3050B*SW846 6020A																					
Arsenic, Total, ICP-MS	3.24		0.032	0.164	mg/Kg	10.7		0.037	0.177	mg/Kg		4.53		0.025	0.123	mg/Kg					
Cadmium, Total, ICP-MS	0.0861		0.016	0.0822	mg/Kg	0.51		0.018	0.0882	mg/Kg		0.108		0.012	0.0615	mg/Kg					
Chromium, Total, ICP-MS	21.5		0.66	3.28	mg/Kg	40.8		0.7	3.52	mg/Kg		29.3		0.48	2.45	mg/Kg					
Copper, Total, ICP-MS	7.17		1.3	6.58	mg/Kg	34.6		1.4	7.07	mg/Kg		26		0.98	4.91	mg/Kg					
Lead, Total, ICP-MS	3.03		0.032	0.164	mg/Kg	58.3		0.037	0.177	mg/Kg		6.3		0.025	0.123	mg/Kg					
Nickel, Total, ICP-MS	22.5		0.32	1.64	mg/Kg	40.6		0.37	1.77	mg/Kg		28.9		0.25	1.23	mg/Kg					
Phosphorus, Total, ICP-MS		<MDL	320	1640	mg/Kg	620	<RDL	370	1770	mg/Kg		390	<RDL	250	1230	mg/Kg					
Silver, Total, ICP-MS	0.02	<RDL	0.016	0.0822	mg/Kg	0.157		0.018	0.0882	mg/Kg		0.054	<RDL	0.012	0.0615	mg/Kg					
Zinc, Total, ICP-MS	41.5		1.6	8.22	mg/Kg	221		1.8	8.82	mg/Kg		50.7		1.2	6.15	mg/Kg					
MT SW846 7471B																					
Mercury, Total, CVAA	0.0085	<RDL	0.0067	0.0666	mg/Kg	0.065	<RDL	0.014	0.138	mg/Kg		0.044	<RDL	0.0092	0.0933	mg/Kg					
OR SW846 3550B*EPA 1614																					
DecaBDE-209	0.353	J	0.044	0.0898	ug/Kg	78.6	J	0.093	0.188	ug/Kg		0.534	J	0.064	0.129	ug/Kg					
HeptaBDE-183		<MDL	0.009	0.0179	ug/Kg	0.194		0.019	0.0375	ug/Kg			<MDL	0.013	0.0256	ug/Kg					
HeptaBDE-190		<MDL	0.009	0.0179	ug/Kg		<MDL	0.019	0.0375	ug/Kg			<MDL	0.013	0.0256	ug/Kg					
HexaBDE-138		<MDL,TA	0.009	0.0179	ug/Kg		<MDL,TA	0.019	0.0375	ug/Kg			<MDL,TA	0.013	0.0256	ug/Kg					
HexaBDE-153	0.0332		0.009	0.0179	ug/Kg	0.196		0.019	0.0375	ug/Kg		0.021	<RDL	0.013	0.0256	ug/Kg					
HexaBDE-154		<MDL	0.009	0.0179	ug/Kg	0.186		0.019	0.0375	ug/Kg		0.017	<RDL	0.013	0.0256	ug/Kg					
PentaBDE-100		<MDL	0.009	0.0179	ug/Kg	0.266		0.019	0.0375	ug/Kg		0.018	<RDL	0.013	0.0256	ug/Kg					
PentaBDE-85		<MDL	0.009	0.0179	ug/Kg	0.0772		0.019	0.0375	ug/Kg			<MDL	0.013	0.0256	ug/Kg					
PentaBDE-99	0.0413	B	0.009	0.0179	ug/Kg	1.39		0.019	0.0375	ug/Kg		0.0788	B3	0.013	0.0256	ug/Kg					
TetraBDE-47	0.0428	B	0.009	0.0179	ug/Kg	1.44		0.019	0.0375	ug/Kg		0.123	B3	0.013	0.0256	ug/Kg					
TetraBDE-66		<MDL	0.009	0.0179	ug/Kg	0.201		0.019	0.0375	ug/Kg			<MDL	0.013	0.0256	ug/Kg					
TetraBDE-71		<MDL,TA	0.009	0.0179	ug/Kg	0.693	TA	0.019	0.0375	ug/Kg			<MDL,TA	0.013	0.0256	ug/Kg					
TriBDE-17		<MDL	0.009	0.0179	ug/Kg		<MDL	0.019	0.0375	ug/Kg			<MDL	0.013	0.0256	ug/Kg					
TriBDE-28		<MDL,TA	0.009	0.0179	ug/Kg	0.028	<RDL,TA	0.019	0.0375	ug/Kg			<MDL,TA	0.013	0.0256	ug/Kg					
OR SW846 3550B*SW846 8081B																					
4,4'-DDD		<MDL	0.9	1.79	ug/Kg	5.52		1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
4,4'-DDE		<MDL	0.9	1.79	ug/Kg	8.25		1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
4,4'-DDT		<MDL	0.9	1.79	ug/Kg	5.46		1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Aldrin		<MDL	0.9	1.79	ug/Kg		<MDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Alpha-BHC		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Alpha-Chlordane		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Beta-BHC		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Delta-BHC		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Dieldrin		<MDL	0.9	1.79	ug/Kg	2.1	<RDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Endosulfan I		<MDL	0.9	1.79	ug/Kg		<MDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Endosulfan II		<MDL	0.9	1.79	ug/Kg		<MDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Endosulfan Sulfate		<MDL	0.9	1.79	ug/Kg		<MDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Endrin		<MDL	0.9	1.79	ug/Kg		<MDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Endrin Aldehyde		<MDL	0.9	1.79	ug/Kg		<MDL	1.9	3.75	ug/Kg			<MDL	1.3	2.56	ug/Kg					
Gamma-BHC (Lindane)		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Gamma-Chlordane		<MDL	0.44	0.898	ug/Kg	1.8	<RDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Heptachlor		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Heptachlor Epoxide		<MDL	0.44	0.898	ug/Kg		<MDL	0.93	1.88	ug/Kg			<MDL	0.64	1.29	ug/Kg					
Methoxychlor		<MDL	4.4	8.98	ug/Kg		<MDL	9.3	18.8	ug/Kg			<MDL	6.4	12.9	ug/Kg					
Toxaphene		<MDL	9	17.9	ug/Kg		<MDL	19	37.5	ug/Kg			<MDL	13	25.6	ug/Kg					
OR SW846 3550B*SW846 8082A																					
Aroclor 1016		<MDL	1.1	2.25	ug/Kg		<MDL	2.3	4.7	ug/Kg			<MDL	1.6	3.22	ug/Kg					
Aroclor 1221		<MDL	2.3	4.48	ug/Kg		<MDL	4.8	9.38	ug/Kg			<MDL	3.3	6.42	ug/Kg					
Aroclor 1232		<MDL	2.3	4.48	ug/Kg		<MDL	4.8	9.38	ug/Kg			<MDL	3.3	6.42	ug/Kg					
Aroclor 1242		<MDL	1.1	2.25	ug/Kg		<MDL	2.3	4.7	ug/Kg			<MDL	1.6	3.22	ug/Kg					
Aroclor 1248		<MDL	1.1	2.25	ug/Kg	13.6		2.3	4.7	ug/Kg			<MDL	1.6	3.22	ug/Kg					
Aroclor 1254		<MDL	1.1	2.25	ug/Kg	44.2		2.3	4.7	ug/Kg			<MDL	1.6	3.22	ug/Kg					
Aroclor 1260		<MDL	1.1	2.25	ug/Kg	18.3	JG	2.3	4.7	ug/Kg			<MDL	1.6	3.22	ug/Kg					

King County Environmental Lab Analytical Report

Project:	421240C					Project:	421240C					Project:	421240C				
Locator:	'0478					Locator:	A434					Locator:	'00631				
Descrip:	LITTLE BEAR CREEK/					Descrip:	THORNTON CREEK//ON					Descrip:	ISSAQUAH CREEK MOU				
Sample:	L48633-1					Sample:	L48633-2					Sample:	L48633-3				
Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED				
ColDate:	8/12/09 12:25					ColDate:	8/12/09 14:15					ColDate:	8/12/09 11:15				
TimeSpan:						TimeSpan:						TimeSpan:					
TotalSolid:	74.3					TotalSolid:	35.5					TotalSolid:	51.9				
ClientLoc:						ClientLoc:						ClientLoc:					
SampDepth:						SampDepth:						SampDepth:					
DRY Weight Basis						**DRY Weight Basis**						**DRY Weight Basis**					
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**
Total Aroclors		<MDL	1.1	2.25	ug/Kg	76.1		2.3	4.7	ug/Kg		<MDL	1.6	3.22	ug/Kg
OR SW846 3550B*SW846 8270D															
1,2,4-Trichlorobenzene		<MDL	0.13	0.269	ug/Kg		<MDL	0.28	0.563	ug/Kg		<MDL	0.19	0.385	ug/Kg
1,2-Dichlorobenzene		<MDL	0.27	0.538	ug/Kg		<MDL	0.56	1.13	ug/Kg		<MDL	0.39	0.771	ug/Kg
1,2-Diphenylhydrazine		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
1,3-Dichlorobenzene		<MDL	0.27	0.538	ug/Kg		<MDL	0.56	1.13	ug/Kg		<MDL	0.39	0.771	ug/Kg
1,4-Dichlorobenzene		<MDL	0.27	0.538	ug/Kg		<MDL	0.56	1.13	ug/Kg		<MDL	0.39	0.771	ug/Kg
2,4,5-Trichlorophenol		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
2,4,6-Trichlorophenol		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
2,4-Dichlorophenol		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
2,4-Dimethylphenol		<MDL	1.3	2.69	ug/Kg		<MDL	2.8	5.63	ug/Kg		<MDL	1.9	3.85	ug/Kg
2,4-Dinitrotoluene		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
2,6-Dinitrotoluene		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
2-Chloronaphthalene		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
2-Chlorophenol		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
2-Methylnaphthalene		<MDL	2.7	5.38	ug/Kg	10	<RDL	5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
2-Methylphenol		<MDL	2.7	5.38	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
2-Nitrophenol		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
4-Bromophenyl Phenyl Ether		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
4-Chlorophenyl Phenyl Ether		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
4-Methylphenol		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Acenaphthene		<MDL	2.7	5.38	ug/Kg	18.2		5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Acenaphthylene		<MDL	2.7	5.38	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Aniline		<MDL	54	108	ug/Kg		<MDL	110	225	ug/Kg		<MDL	77	154	ug/Kg
Anthracene		<MDL	2.7	5.38	ug/Kg	58.9		5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Benzo(a)anthracene		<MDL	2.7	5.38	ug/Kg	304		5.6	11.3	ug/Kg	10.3		3.9	7.71	ug/Kg
Benzo(a)pyrene		<MDL	2.7	5.38	ug/Kg	332		5.6	11.3	ug/Kg	11.2		3.9	7.71	ug/Kg
Benzo(b)fluoranthene		<MDL	2.7	5.38	ug/Kg	417		5.6	11.3	ug/Kg	12.8		3.9	7.71	ug/Kg
Benzo(g,h,i)perylene		<MDL	2.7	5.38	ug/Kg	310		5.6	11.3	ug/Kg	5.4	<RDL	3.9	7.71	ug/Kg
Benzo(k)fluoranthene		<MDL	2.7	5.38	ug/Kg	335		5.6	11.3	ug/Kg	10.7		3.9	7.71	ug/Kg
Benzoic Acid	122		13	26.9	ug/Kg	1110		28	56.3	ug/Kg	256		19	38.5	ug/Kg
Benzyl Alcohol		<MDL	2.7	5.38	ug/Kg		<MDL	5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Benzyl Butyl Phthalate		<MDL	5.4	10.8	ug/Kg	301		11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Bis(2-Chloroethoxy)Methane		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Bis(2-Chloroethyl)Ether		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Bis(2-Chloroisopropyl)Ether		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Bis(2-ethylhexyl)adipate	23	<RDL	13	26.9	ug/Kg	105		28	56.3	ug/Kg	29	<RDL	19	38.5	ug/Kg
Bis(2-Ethylhexyl)Phthalate	46.4	B	5.4	10.8	ug/Kg	2490		11	22.5	ug/Kg	97.7	B	7.7	15.4	ug/Kg
Bisphenol A		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
Caffeine		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Carbazole		<MDL	2.7	5.38	ug/Kg	42.8		5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Chrysene		<MDL	2.7	5.38	ug/Kg	358		5.6	11.3	ug/Kg	12.5		3.9	7.71	ug/Kg
Coprostanol		<MDL	54	108	ug/Kg		<MDL	110	225	ug/Kg		<MDL	77	154	ug/Kg
Dibenzo(a,h)anthracene		<MDL	2.7	5.38	ug/Kg	112		5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Dibenzofuran		<MDL	2.7	5.38	ug/Kg	9.3	<RDL	5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Diethyl Phthalate		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Dimethyl Phthalate	19.9		5.4	10.8	ug/Kg	76.1		11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Di-N-Butyl Phthalate	7.4	<RDL,B	5.4	10.8	ug/Kg	36.6	B	11	22.5	ug/Kg	13	<RDL,B	7.7	15.4	ug/Kg
Di-N-Octyl Phthalate		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Fluoranthene		<MDL	2.7	5.38	ug/Kg	535		5.6	11.3	ug/Kg	19		3.9	7.71	ug/Kg
Fluorene		<MDL	2.7	5.38	ug/Kg	20.2		5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Hexachlorobenzene		<MDL	0.13	0.269	ug/Kg		<MDL	0.28	0.563	ug/Kg		<MDL	0.19	0.385	ug/Kg
Hexachlorobutadiene		<MDL	0.67	1.35	ug/Kg		<MDL	1.4	2.82	ug/Kg		<MDL	0.96	1.93	ug/Kg
Hexachloroethane		<MDL	1.3	2.69	ug/Kg		<MDL	2.8	5.63	ug/Kg		<MDL	1.9	3.85	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL	2.7	5.38	ug/Kg	277		5.6	11.3	ug/Kg	6.7	<RDL	3.9	7.71	ug/Kg
Isophorone		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
Naphthalene		<MDL	2.7	5.38	ug/Kg	7	<RDL	5.6	11.3	ug/Kg		<MDL	3.9	7.71	ug/Kg
Nitrobenzene		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
N-Nitrosodimethylamine		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
N-Nitrosodi-N-Propylamine		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
N-Nitrosodiphenylamine		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Pentachlorophenol		<MDL	13	26.9	ug/Kg		<MDL	28	56.3	ug/Kg		<MDL	19	38.5	ug/Kg
Phenanthrene		<MDL	2.7	5.38	ug/Kg	304		5.6	11.3	ug/Kg	16.1		3.9	7.71	ug/Kg
Phenol		<MDL	5.4	10.8	ug/Kg		<MDL	11	22.5	ug/Kg		<MDL	7.7	15.4	ug/Kg
Pyrene	2.7	<RDL	2.7	5.38	ug/Kg	1010		5.6	11.3	ug/Kg	22.9		3.9	7.71	ug/Kg
Total 4-Nonylphenol		<MDL	27	53.8	ug/Kg		<MDL	56	113	ug/Kg		<MDL	39	77.1	ug/Kg
OR TERNS (2002)															
Estradiol		<MDL	0.067	0.678	ug/Kg		<MDL	0.14	1.42	ug/Kg		<MDL	0.096	0.971	ug/Kg
Estrone		<MDL	0.04	0.406	ug/Kg	0.31	<RDL	0.085	0.851	ug/Kg	0.58	<RDL	0.058	0.582	ug/Kg
Ethynyl estradiol		<MDL	0.067	0.678	ug/Kg		<MDL	0.14	1.42	ug/Kg		<MDL	0.096	0.971	ug/Kg
OR WDOE NWTPH-DX															
Diesel Range (>C12-C24)	51	TA,J	34	34	mg/Kg										
Lube Oil Range (>C24)	82	TA,J	34	34	mg/Kg	1000		70	70	mg/Kg	69		48	48	mg/Kg

* Not converted to dry weight basis

King County Environmental Lab Analytical Report

Project:	421240C	421240C	421240C
Locator:	'0432	'0474	'0322
Descrip:	MCALEER CREEK//ON	NORTH CREEK//UPSTR	NEWAUKUM CREEK DOW
Sample:	L48633-4	L48633-5	L48633-6
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/12/09 13:30	8/12/09 13:00	8/10/09 11:40
TimeSpan:			
TotalSolid:	58.3	45.7	39.9
ClientLoc:			
SampDepth:			
DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
CV ASTM D422															
Clay*		<MDL	0.74	1.49	%	2		1	2.03	%		<MDL	1.1	2.2	%
Fines*	8.9		0.74	1.49	%	24.4		1	2.03	%	24.2		1.1	2.2	%
Gravel*	3.6		0.15	1.49	%	0.9	<RDL	0.2	2.03	%	7.3		0.22	2.2	%
p+0.00*	6.6		0.15	1.49	%	1.8		0.2	2.03	%	3.3		0.22	2.2	%
p+1.00*	20		0.15	1.49	%	1.7		0.2	2.03	%	10.7		0.22	2.2	%
p+10.0(equal/more than)*		<MDL	0.74	1.49	%		<MDL	1	2.03	%		<MDL	1.1	2.2	%
p+2.00*	29.3		0.15	1.49	%	14.2		0.2	2.03	%	17.2		0.22	2.2	%
p+3.00*	19.3		0.15	1.49	%	32.3		0.2	2.03	%	19.4		0.22	2.2	%
p+4.00*	4.6		0.15	1.49	%	20.1		0.2	2.03	%	13.4		0.22	2.2	%
p+5.00*	6		0.74	1.49	%	18.3		1	2.03	%	22		1.1	2.2	%
p+6.00*	1.5		0.74	1.49	%	2		1	2.03	%	1.1		1.1	2.2	%
p+7.00*	0.7	<RDL	0.74	1.49	%	2		1	2.03	%	1.1		1.1	2.2	%
p+8.00*	0.7	<RDL	0.74	1.49	%		<MDL	1	2.03	%		<MDL	1.1	2.2	%
p+9.00*		<MDL	0.74	1.49	%	2		1	2.03	%		<MDL	1.1	2.2	%
p-1.00*	2.3		0.15	1.49	%	0.9	<RDL	0.2	2.03	%	1.5		0.22	2.2	%
p-2.00(less than)*	1.3		0.15	1.49	%		<MDL	0.2	2.03	%	5.8		0.22	2.2	%
p-2.00*		<MDL	0.15	1.49	%		<MDL	0.2	2.03	%		<MDL	0.22	2.2	%
Sand*	79.9		0.15	1.49	%	70		0.2	2.03	%	63.9		0.22	2.2	%
Silt*	8.9		0.74	1.49	%	22.4		1	2.03	%	24.2		1.1	2.2	%
CV EPA DEC 1991															
Sulfide, Acid Volatile												<MDL,JG	0.63	2.49	mg/Kg
CV KEROUEL & AMINOT 1997(KCL)															
Ammonia Nitrogen	10.3		0.43	0.847	mg/Kg	18.5		0.55	1.08	mg/Kg	18.7		0.63	1.24	mg/Kg
CV SM2540-G															
Total Solids*	58.3		0.005	0.01	%	45.7		0.005	0.01	%	39.9		0.005	0.01	%
CV SM4500-P-F OL															
Orthophosphate Phosphorus	22		1.6	4.01	mg/Kg	43.8		2.1	5.32	mg/Kg	34.8		2.5	6.17	mg/Kg
CV SW846 9045C															
pH*	7.31				pH	7.29				pH	7.29				pH
CV SW846 9060-PSEP96															
Total Organic Carbon	17800		1500	3000	mg/Kg	23600		1800	3650	mg/Kg	27300		2100	4140	mg/Kg
MT EPA 200.7															
Arsenic, Extractable, SEM											1.8	<RDL	1.3	6.24	mg/Kg
Cadmium, Extractable, SEM											0.12	<RDL	0.1	0.499	mg/Kg
Chromium, Extractable, SEM											1.64		0.15	0.747	mg/Kg
Copper, Extractable, SEM											8.82		0.2	0.997	mg/Kg
Lead, Extractable, SEM											3.8	<RDL	1	4.99	mg/Kg
Nickel, Extractable, SEM											3.16		0.25	1.25	mg/Kg
Silver, Extractable, SEM												<MDL	0.2	0.997	mg/Kg
Zinc, Extractable, SEM											26.6		0.25	1.25	mg/Kg
MT EPA 245.1*SW846 7470A															
Mercury, Extractable, SEM												<MDL	0.0025	0.00747	mg/Kg
MT SW846 3050B*SW846 6020A															
Arsenic, Total, ICP-MS	4.72		0.021	0.106	mg/Kg	8.25		0.028	0.139	mg/Kg	5.04		0.03	0.154	mg/Kg
Cadmium, Total, ICP-MS	0.119		0.011	0.053	mg/Kg	0.149		0.014	0.0696	mg/Kg	0.124		0.016	0.0772	mg/Kg
Chromium, Total, ICP-MS	29.5		0.43	2.13	mg/Kg	35.7		0.55	2.78	mg/Kg	23.3		0.63	3.08	mg/Kg
Copper, Total, ICP-MS	11.8		0.84	4.24	mg/Kg	15.6		1.1	5.58	mg/Kg	20.1		1.2	6.17	mg/Kg
Lead, Total, ICP-MS	12		0.021	0.106	mg/Kg	8.95		0.028	0.139	mg/Kg	5.41		0.03	0.154	mg/Kg
Nickel, Total, ICP-MS	33.6		0.21	1.06	mg/Kg	32.4		0.28	1.39	mg/Kg	22.3		0.3	1.54	mg/Kg
Phosphorus, Total, ICP-MS	330	<RDL	210	1060	mg/Kg	550	<RDL	280	1390	mg/Kg	600	<RDL	300	1540	mg/Kg
Silver, Total, ICP-MS	0.041	<RDL	0.011	0.053	mg/Kg	0.053	<RDL	0.014	0.0696	mg/Kg	0.063	<RDL	0.016	0.0772	mg/Kg
Zinc, Total, ICP-MS	77.4		1.1	5.3	mg/Kg	77.7		1.4	6.96	mg/Kg	62.2		1.6	7.72	mg/Kg
MT SW846 7471B															
Mercury, Total, CVAA	0.021	<RDL	0.0084	0.0844	mg/Kg	0.039	<RDL	0.011	0.106	mg/Kg	0.048	<RDL	0.012	0.123	mg/Kg
OR SW846 3550B*EPA 1614															
DecaBDE-209	1.32	J	0.057	0.114	ug/Kg	1.25	J	0.072	0.146	ug/Kg	0.193	J	0.083	0.167	ug/Kg
HeptaBDE-183		<MDL	0.011	0.0228	ug/Kg	0.021	<RDL	0.015	0.0291	ug/Kg		<MDL	0.017	0.0333	ug/Kg
HeptaBDE-190		<MDL	0.011	0.0228	ug/Kg		<MDL	0.015	0.0291	ug/Kg		<MDL	0.017	0.0333	ug/Kg
HexaBDE-138		<MDL,TA	0.011	0.0228	ug/Kg	0.024	<RDL,TA	0.015	0.0291	ug/Kg		<MDL,TA	0.017	0.0333	ug/Kg
HexaBDE-153	0.0588		0.011	0.0228	ug/Kg	0.0786		0.015	0.0291	ug/Kg	0.0632		0.017	0.0333	ug/Kg
HexaBDE-154	0.0262		0.011	0.0228	ug/Kg	0.0326		0.015	0.0291	ug/Kg		<MDL	0.017	0.0333	ug/Kg
PentaBDE-100	0.0396		0.011	0.0228	ug/Kg	0.0593		0.015	0.0291	ug/Kg	0.021	<RDL	0.017	0.0333	ug/Kg
PentaBDE-85		<MDL	0.011	0.0228	ug/Kg	0.02	<RDL	0.015	0.0291	ug/Kg		<MDL	0.017	0.0333	ug/Kg
PentaBDE-99	0.199		0.011	0.0228	ug/Kg	0.23		0.015	0.0291	ug/Kg	0.089	B3	0.017	0.0333	ug/Kg
TetraBDE-47	0.208		0.011	0.0228	ug/Kg	0.256		0.015	0.0291	ug/Kg	0.151	B3	0.017	0.0333	ug/Kg
TetraBDE-66		<MDL	0.011	0.0228	ug/Kg		<MDL	0.015	0.0291	ug/Kg		<MDL	0.017	0.0333	ug/Kg
TetraBDE-71		<MDL,TA	0.011	0.0228	ug/Kg	0.0328	TA	0.015	0.0291	ug/Kg		<MDL,TA	0.017	0.0333	ug/Kg
TriBDE-17		<MDL	0.011	0.0228	ug/Kg		<MDL	0.015	0.0291	ug/Kg		<MDL	0.017	0.0333	ug/Kg
TriBDE-28		<MDL,TA	0.011	0.0228	ug/Kg		<MDL,TA	0.015	0.0291	ug/Kg		<MDL,TA	0.017	0.0333	ug/Kg
OR SW846 3550B*SW846 8081B															
4,4'-DDD	3.5		1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
4,4'-DDE	3.02		1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
4,4'-DDT	4.31		1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Aldrin		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Alpha-BHC		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Alpha-Chlordane		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Beta-BHC		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Delta-BHC		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Dieldrin		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Endosulfan I		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Endosulfan II		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Endosulfan Sulfate		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Endrin		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Endrin Aldehyde		<MDL	1.1	2.28	ug/Kg		<MDL	1.5	2.91	ug/Kg		<MDL	1.7	3.33	ug/Kg
Gamma-BHC (Lindane)		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Gamma-Chlordane		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Heptachlor		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Heptachlor Epoxide		<MDL	0.57	1.14	ug/Kg		<MDL	0.72	1.46	ug/Kg		<MDL	0.83	1.67	ug/Kg
Methoxychlor		<MDL	5.7	11.4	ug/Kg		<MDL	7.2	14.6	ug/Kg		<MDL	8.3	16.7	ug/Kg
Toxaphene		<MDL	11	22.8	ug/Kg		<MDL	15	29.1	ug/Kg		<MDL	17	33.3	ug/Kg
OR SW846 3550B*SW846 8082A															
Aroclor 1016		<MDL	1.4	2.86	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	2.1	4.19	ug/Kg
Aroclor 1221		<MDL	2.9	5.71	ug/Kg		<MDL	3.7	7.29	ug/Kg		<MDL	4.3	8.35	ug/Kg
Aroclor 1232		<MDL	2.9	5.71	ug/Kg		<MDL	3.7	7.29	ug/Kg		<MDL	4.3	8.35	ug/Kg
Aroclor 1242		<MDL	1.4	2.86	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	2.1	4.19	ug/Kg
Aroclor 1248		<MDL	1.4	2.86	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	2.1	4.19	ug/Kg
Aroclor 1254		<MDL	1.4	2.86	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	2.1	4.19	ug/Kg
Aroclor 1260		<MDL	1.4	2.86	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	2.1	4.19	ug/Kg

King County Environmental Lab Analytical Report

Project:	421240C					Project:	421240C					Project:	421240C			
Locator:	'0432					Locator:	'0474					Locator:	'0322			
Descrip:	MCALEER CREEK//ON					Descrip:	NORTH CREEK//UPSTR					Descrip:	NEWAUKUM CREEK DOW			
Sample:	L48633-4					Sample:	L48633-5					Sample:	L48633-6			
Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED					Matrix:	SE FRSHWTRSED			
ColDate:	8/12/09 13:30					ColDate:	8/12/09 13:00					ColDate:	8/10/09 11:40			
TimeSpan:						TimeSpan:						TimeSpan:				
TotalSolid:	58.3					TotalSolid:	45.7					TotalSolid:	39.9			
ClientLoc:						ClientLoc:						ClientLoc:				
SampDepth:						SampDepth:						SampDepth:				
DRY Weight Basis						**DRY Weight Basis**						**DRY Weight Basis**				
Parameters	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	**Value**	**Qual**	**MDL**	**RDL**	**Units**	
Total Aroclors		<MDL	1.4	2.86	ug/Kg		<MDL	1.8	3.65	ug/Kg		<MDL	2.1	4.19	ug/Kg	
OR SW846 3550B*SW846 8270D																
1,2,4-Trichlorobenzene		<MDL	0.17	0.343	ug/Kg		<MDL	0.22	0.438	ug/Kg		<MDL	0.25	0.501	ug/Kg	
1,2-Dichlorobenzene		<MDL	0.34	0.686	ug/Kg		<MDL	0.44	0.875	ug/Kg		<MDL	0.5	1	ug/Kg	
1,2-Diphenylhydrazine		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
1,3-Dichlorobenzene		<MDL	0.34	0.686	ug/Kg		<MDL	0.44	0.875	ug/Kg		<MDL	0.5	1	ug/Kg	
1,4-Dichlorobenzene		<MDL	0.34	0.686	ug/Kg		<MDL	0.44	0.875	ug/Kg		<MDL	0.5	1	ug/Kg	
2,4,5-Trichlorophenol		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
2,4,6-Trichlorophenol		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
2,4-Dichlorophenol		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
2,4-Dimethylphenol		<MDL	1.7	3.43	ug/Kg		<MDL	2.2	4.38	ug/Kg		<MDL	2.5	5.01	ug/Kg	
2,4-Dinitrotoluene		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
2,6-Dinitrotoluene		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
2-Chloronaphthalene		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
2-Chlorophenol		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
2-Methylnaphthalene		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
2-Methylphenol		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
2-Nitrophenol		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
4-Bromophenyl Phenyl Ether		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
4-Chlorophenyl Phenyl Ether		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
4-Methylphenol		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Acenaphthene		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Acenaphthylene		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Aniline		<MDL	69	137	ug/Kg		<MDL	88	175	ug/Kg		<MDL	100	201	ug/Kg	
Anthracene	4.3	<RDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Benzo(a)anthracene	16.2		3.4	6.86	ug/Kg	11.8		4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Benzo(a)pyrene	23.5		3.4	6.86	ug/Kg	17.7		4.4	8.75	ug/Kg	33.8		5	10	ug/Kg	
Benzo(b)fluoranthene	26.9		3.4	6.86	ug/Kg	20.5		4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Benzo(g,h,i)perylene	16.4		3.4	6.86	ug/Kg	14.7		4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Benzo(k)fluoranthene	25.7		3.4	6.86	ug/Kg	20.1		4.4	8.75	ug/Kg	5.3	<RDL	5	10	ug/Kg	
Benzoic Acid	201		17	34.3	ug/Kg	335		22	43.8	ug/Kg	258		25	50.1	ug/Kg	
Benzyl Alcohol		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Benzyl Butyl Phthalate	61.9		6.9	13.7	ug/Kg	54.9		8.8	17.5	ug/Kg	59.6		10	20.1	ug/Kg	
Bis(2-Chloroethoxy)Methane		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Bis(2-Chloroethyl)Ether		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Bis(2-Chloroisopropyl)Ether		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Bis(2-ethylhexyl)adipate	73.1		17	34.3	ug/Kg	119		22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
Bis(2-Ethylhexyl)Phthalate	172	B	6.9	13.7	ug/Kg	176	B	8.8	17.5	ug/Kg	89.5	B	10	20.1	ug/Kg	
Bisphenol A		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
Caffeine		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Carbazole		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Chrysene	23.2		3.4	6.86	ug/Kg	17.8		4.4	8.75	ug/Kg	5.3	<RDL	5	10	ug/Kg	
Coprostanol		<MDL	69	137	ug/Kg		<MDL	88	175	ug/Kg		<MDL	100	201	ug/Kg	
Dibenzo(a,h)anthracene	5.7	<RDL	3.4	6.86	ug/Kg	5.9	<RDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Dibenzofuran		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Diethyl Phthalate		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Dimethyl Phthalate		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Di-N-Butyl Phthalate	13	<RDL,B	6.9	13.7	ug/Kg	13	<RDL,B	8.8	17.5	ug/Kg	13	<RDL,B	10	20.1	ug/Kg	
Di-N-Octyl Phthalate		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Fluoranthene	32.8		3.4	6.86	ug/Kg	21.1		4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Fluorene		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Hexachlorobenzene		<MDL	0.17	0.343	ug/Kg		<MDL	0.22	0.438	ug/Kg		<MDL	0.25	0.501	ug/Kg	
Hexachlorobutadiene		<MDL	0.86	1.72	ug/Kg		<MDL	1.1	2.19	ug/Kg		<MDL	1.3	2.51	ug/Kg	
Hexachloroethane		<MDL	1.7	3.43	ug/Kg		<MDL	2.2	4.38	ug/Kg		<MDL	2.5	5.01	ug/Kg	
Indeno(1,2,3-Cd)Pyrene	14.8		3.4	6.86	ug/Kg	12.8		4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Isophorone		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
Naphthalene		<MDL	3.4	6.86	ug/Kg		<MDL	4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Nitrobenzene		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
N-Nitrosodimethylamine		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
N-Nitrosodi-N-Propylamine		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
N-Nitrosodiphenylamine		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Pentachlorophenol		<MDL	17	34.3	ug/Kg		<MDL	22	43.8	ug/Kg		<MDL	25	50.1	ug/Kg	
Phenanthrene	17.7		3.4	6.86	ug/Kg	16.1		4.4	8.75	ug/Kg		<MDL	5	10	ug/Kg	
Phenol		<MDL	6.9	13.7	ug/Kg		<MDL	8.8	17.5	ug/Kg		<MDL	10	20.1	ug/Kg	
Pyrene	42.2		3.4	6.86	ug/Kg	30.9		4.4	8.75	ug/Kg	5.3	<RDL	5	10	ug/Kg	
Total 4-Nonylphenol		<MDL	34	68.6	ug/Kg		<MDL	44	87.5	ug/Kg		<MDL	50	100	ug/Kg	
OR TERNS (2002)																
Estradiol		<MDL	0.086	0.864	ug/Kg		<MDL	0.11	1.1	ug/Kg		<MDL	0.13	1.26	ug/Kg	
Estrone	0.22	<RDL	0.051	0.518	ug/Kg	0.24	<RDL	0.066	0.661	ug/Kg	0.12	<RDL	0.075	0.757	ug/Kg	
Ethynyl estradiol		<MDL	0.086	0.864	ug/Kg		<MDL	0.11	1.1	ug/Kg		<MDL	0.13	1.26	ug/Kg	
OR WDOE NWTPH-DX																
Diesel Range (>C12-C24)												<MDL	63	63	mg/Kg	
Lube Oil Range (>C24)	91		43	43	mg/Kg	140		55	55	mg/Kg		<MDL	63	63	mg/Kg	
* Not converted to dry weight basis																

King County Environmental Lab Analytical Report

	Sample 1	Sample 2	Sample 3
Project:	421240C	421240C	421240C
Locator:	A320	'0317	A315
Descrip:	BIG SOOS CREEK//US	SPRINGBROOK CREEK/	HILL CREEK (MILL)/
Sample:	L48633-7	L48633-8	L48633-9
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/10/09 8:55	8/12/09 9:10	8/12/09 10:05
TimeSpan:			
TotalSolid:	50.6	40.9	40.4
ClientLoc:			
SampDepth:			
	DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
CV ASTM D422															
Clay*		<MDL	1	2.02	%	3.5		1.2	2.33	%	2.2		1.1	2.15	%
Fines*	26.2		1	2.02	%	55.9		1.2	2.33	%	43.1		1.1	2.15	%
Gravel*		<MDL	0.2	2.02	%	2.6		0.23	2.33	%	4.4		0.22	2.15	%
p+0.00*	0.4	<RDL	0.2	2.02	%	1.1		0.23	2.33	%	2.2		0.22	2.15	%
p+1.00*	2.1		0.2	2.02	%	1.7		0.23	2.33	%	6.2		0.22	2.15	%
p+10.0(equal/more than)*		<MDL	1	2.02	%		<MDL	1.2	2.33	%		<MDL	1.1	2.15	%
p+2.00*	18.1		0.2	2.02	%	1.9		0.23	2.33	%	9.1		0.22	2.15	%
p+3.00*	33.9		0.2	2.02	%	10.8		0.23	2.33	%	13.6		0.22	2.15	%
p+4.00*	21.7		0.2	2.02	%	27.9		0.23	2.33	%	18.4		0.22	2.15	%
p+5.00*	22.2		1	2.02	%	39.6		1.2	2.33	%	32.3		1.1	2.15	%
p+6.00*	3		1	2.02	%	4.7		1.2	2.33	%	4.3		1.1	2.15	%
p+7.00*	1		1	2.02	%	4.7		1.2	2.33	%	4.3		1.1	2.15	%
p+8.00*		<MDL	1	2.02	%	3.5		1.2	2.33	%		<MDL	1.1	2.15	%
p+9.00*		<MDL	1	2.02	%	3.5		1.2	2.33	%	2.2		1.1	2.15	%
p-1.00*		<MDL	0.2	2.02	%	0.7	<RDL	0.23	2.33	%	2.1		0.22	2.15	%
p-2.00(less than)*		<MDL	0.2	2.02	%	1.9		0.23	2.33	%	2		0.22	2.15	%
p-2.00*		<MDL	0.2	2.02	%		<MDL	0.23	2.33	%	0.2	<RDL	0.22	2.15	%
Sand*	76.2		0.2	2.02	%	43.4		0.23	2.33	%	49.4		0.22	2.15	%
Silt*	26.2		1	2.02	%	52.4		1.2	2.33	%	40.9		1.1	2.15	%
CV EPA DEC 1991															
Sulfide, Acid Volatile															
CV KEROUEL & AMINOT 1997(KCL)															
Ammonia Nitrogen	10.4		0.3	0.589	mg/Kg	16.6		0.59	1.17	mg/Kg	23.5		0.59	1.2	mg/Kg
CV SM2540-G															
Total Solids*	50.6		0.005	0.01	%	40.9		0.005	0.01	%	40.4		0.005	0.01	%
CV SM4500-P-F OL															
Orthophosphate Phosphorus	16.7		1.9	4.84	mg/Kg	160		12	29.6	mg/Kg	102		11	28.5	mg/Kg
CV SW846 9045C															
pH*	7.34				pH	7.22				pH	7.18				pH
CV SW846 9060-PSEP96															
Total Organic Carbon	19000		1900	3740	mg/Kg	34200		3400	6890	mg/Kg	25000		2300	4530	mg/Kg
MT EPA 200.7															
Arsenic, Extractable, SEM															
Cadmium, Extractable, SEM															
Chromium, Extractable, SEM															
Copper, Extractable, SEM															
Lead, Extractable, SEM															
Nickel, Extractable, SEM															
Silver, Extractable, SEM															
Zinc, Extractable, SEM															
MT EPA 245.1*SW846 7470A															
Mercury, Extractable, SEM															
MT SW846 3050B*SW846 6020A															
Arsenic, Total, ICP-MS	5.69		0.026	0.125	mg/Kg	19.2		0.029	0.152	mg/Kg	12.9		0.032	0.155	mg/Kg
Cadmium, Total, ICP-MS	0.109		0.012	0.0625	mg/Kg	2.09		0.015	0.0758	mg/Kg	0.309		0.016	0.0775	mg/Kg
Chromium, Total, ICP-MS	37.2		0.49	2.49	mg/Kg	32.5		0.61	3.03	mg/Kg	20		0.62	3.09	mg/Kg
Copper, Total, ICP-MS	15.9		1	5	mg/Kg	45.2		1.2	6.06	mg/Kg	26.7		1.2	6.19	mg/Kg
Lead, Total, ICP-MS	6.17		0.026	0.125	mg/Kg	43.8		0.029	0.152	mg/Kg	19.8		0.032	0.155	mg/Kg
Nickel, Total, ICP-MS	40.1		0.26	1.25	mg/Kg	22.2		0.29	1.52	mg/Kg	17.9		0.32	1.55	mg/Kg
Phosphorus, Total, ICP-MS	400	<RDL	260	1250	mg/Kg	2120		290	1520	mg/Kg	1400	<RDL	320	1550	mg/Kg
Silver, Total, ICP-MS	0.051	<RDL	0.012	0.0625	mg/Kg	0.201		0.015	0.0758	mg/Kg	0.28		0.016	0.0775	mg/Kg
Zinc, Total, ICP-MS	46.6		1.2	6.25	mg/Kg	345		1.5	7.58	mg/Kg	113		1.6	7.75	mg/Kg
MT SW846 7471B															
Mercury, Total, CVAA	0.04	<RDL	0.0097	0.0974	mg/Kg	0.088	<RDL	0.012	0.12	mg/Kg	0.224		0.012	0.122	mg/Kg
OR SW846 3550B*EPA 1614															
DecaBDE-209	0.326	J	0.065	0.132	ug/Kg	80.7	J	0.081	0.163	ug/Kg	2.15	J	0.082	0.165	ug/Kg
HeptaBDE-183		<MDL	0.013	0.0263	ug/Kg	0.523		0.016	0.0325	ug/Kg		<MDL	0.017	0.0329	ug/Kg
HeptaBDE-190		<MDL	0.013	0.0263	ug/Kg	0.0792		0.016	0.0325	ug/Kg		<MDL	0.017	0.0329	ug/Kg
HexaBDE-138	0.015	<RDL,TA	0.013	0.0263	ug/Kg		<MDL,TA	0.016	0.0325	ug/Kg	0.02	<RDL,TA	0.017	0.0329	ug/Kg
HexaBDE-153	0.0603		0.013	0.0263	ug/Kg	0.653		0.016	0.0325	ug/Kg	0.0787		0.017	0.0329	ug/Kg
HexaBDE-154	0.016	<RDL	0.013	0.0263	ug/Kg	0.54		0.016	0.0325	ug/Kg	0.0584		0.017	0.0329	ug/Kg
PentaBDE-100	0.014	<RDL	0.013	0.0263	ug/Kg	0.961		0.016	0.0325	ug/Kg	0.0589		0.017	0.0329	ug/Kg
PentaBDE-85		<MDL	0.013	0.0263	ug/Kg	0.271		0.016	0.0325	ug/Kg	0.017	<RDL	0.017	0.0329	ug/Kg
PentaBDE-99	0.0389	B	0.013	0.0263	ug/Kg	4.91		0.016	0.0325	ug/Kg	0.257		0.017	0.0329	ug/Kg
TetraBDE-47	0.0783	B	0.013	0.0263	ug/Kg	1.96		0.016	0.0325	ug/Kg	0.214	B3	0.017	0.0329	ug/Kg
TetraBDE-66		<MDL	0.013	0.0263	ug/Kg	0.213		0.016	0.0325	ug/Kg		<MDL	0.017	0.0329	ug/Kg
TetraBDE-71	0.016	<RDL,TA	0.013	0.0263	ug/Kg	0.851	TA	0.016	0.0325	ug/Kg	0.025	<RDL,TA	0.017	0.0329	ug/Kg
TriBDE-17		<MDL	0.013	0.0263	ug/Kg		<MDL	0.016	0.0325	ug/Kg		<MDL	0.017	0.0329	ug/Kg
TriBDE-28		<MDL,TA	0.013	0.0263	ug/Kg	0.0355	TA	0.016	0.0325	ug/Kg		<MDL,TA	0.017	0.0329	ug/Kg
OR SW846 3550B*SW846 8081B															
4,4'-DDD		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg	3.37		1.7	3.29	ug/Kg
4,4'-DDE		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
4,4'-DDT		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Aldrin		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Alpha-BHC		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Alpha-Chlordane		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Beta-BHC		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Delta-BHC		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Dieldrin		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Endosulfan I		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Endosulfan II		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Endosulfan Sulfate		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Endrin		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Endrin Aldehyde		<MDL	1.3	2.63	ug/Kg		<MDL	1.6	3.25	ug/Kg		<MDL	1.7	3.29	ug/Kg
Gamma-BHC (Lindane)		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Gamma-Chlordane		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Heptachlor		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Heptachlor Epoxide		<MDL	0.65	1.32	ug/Kg		<MDL	0.81	1.63	ug/Kg		<MDL	0.82	1.65	ug/Kg
Methoxychlor		<MDL	6.5	13.2	ug/Kg		<MDL	8.1	16.3	ug/Kg		<MDL	8.2	16.5	ug/Kg
Toxaphene		<MDL	13	26.3	ug/Kg		<MDL	16	32.5	ug/Kg		<MDL	17	32.9	ug/Kg
OR SW846 3550B*SW846 8082A															
Aroclor 1016		<MDL	1.6	3.3	ug/Kg		<MDL	2	4.08	ug/Kg		<MDL	2.1	4.13	ug/Kg
Aroclor 1221		<MDL	3.4	6.58	ug/Kg		<MDL	4.2	8.14	ug/Kg		<MDL	4.2	8.24	ug/Kg
Aroclor 1232		<MDL	3.4	6.58	ug/Kg		<MDL	4.2	8.14	ug/Kg		<MDL	4.2	8.24	ug/Kg
Aroclor 1242		<MDL	1.6	3.3	ug/Kg		<MDL	2	4.08	ug/Kg		<MDL	2.1	4.13	ug/Kg
Aroclor 1248		<MDL	1.6	3.3	ug/Kg		<MDL	2	4.08	ug/Kg		<MDL	2.1	4.13	ug/Kg
Aroclor 1254		<MDL	1.6	3.3	ug/Kg	7.97		2	4.08	ug/Kg	3.7	<RDL	2.1	4.13	ug/Kg
Aroclor 1260		<MDL	1.6	3.3	ug/Kg	12.2	JG	2	4.08	ug/Kg	5.07	JG	2.1	4.13	ug/Kg

King County Environmental Lab Analytical Report

	Sample 1	Sample 2	Sample 3
Project:	421240C	421240C	421240C
Locator:	A320	'0317	A315
Descrip:	BIG SOOS CREEK//US	SPRINGBROOK CREEK/	HILL CREEK (MILL)/
Sample:	L48633-7	L48633-8	L48633-9
Matrix:	SE FRSHWTRSED	SE FRSHWTRSED	SE FRSHWTRSED
ColDate:	8/10/09 8:55	8/12/09 9:10	8/12/09 10:05
TimeSpan:			
TotalSolid:	50.6	40.9	40.4
ClientLoc:			
SampDepth:			
	DRY Weight Basis	**DRY Weight Basis**	**DRY Weight Basis**

Parameters	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units	Value	Qual	MDL	RDL	Units
Total Aroclors		<MDL	1.6	3.3	ug/Kg	20.2		2	4.08	ug/Kg	8.84		2.1	4.13	ug/Kg
OR SW846 3550B*SW846 8270D															
1,2,4-Trichlorobenzene		<MDL	0.2	0.395	ug/Kg		<MDL	0.24	0.489	ug/Kg		<MDL	0.25	0.495	ug/Kg
1,2-Dichlorobenzene		<MDL	0.4	0.791	ug/Kg		<MDL	0.49	0.978	ug/Kg		<MDL	0.5	0.99	ug/Kg
1,2-Diphenylhydrazine		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
1,3-Dichlorobenzene		<MDL	0.4	0.791	ug/Kg		<MDL	0.49	0.978	ug/Kg		<MDL	0.5	0.99	ug/Kg
1,4-Dichlorobenzene		<MDL	0.4	0.791	ug/Kg		<MDL	0.49	0.978	ug/Kg		<MDL	0.5	0.99	ug/Kg
2,4,5-Trichlorophenol		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
2,4,6-Trichlorophenol		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
2,4-Dichlorophenol		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
2,4-Dimethylphenol		<MDL	2	3.95	ug/Kg		<MDL	2.4	4.89	ug/Kg		<MDL	2.5	4.95	ug/Kg
2,4-Dinitrotoluene		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
2,6-Dinitrotoluene		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
2-Chloronaphthalene		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
2-Chlorophenol		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
2-Methylnaphthalene		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
2-Methylphenol		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
2-Nitrophenol		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
4-Bromophenyl Phenyl Ether		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
4-Chlorophenyl Phenyl Ether		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
4-Methylphenol		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Acenaphthene		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Acenaphthylene		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Aniline		<MDL	79	158	ug/Kg		<MDL	98	196	ug/Kg		<MDL	99	198	ug/Kg
Anthracene	6.5	<RDL	4	7.91	ug/Kg	35.5		4.9	9.78	ug/Kg	6.2	<RDL	5	9.9	ug/Kg
Benzo(a)anthracene	10.8		4	7.91	ug/Kg	164		4.9	9.78	ug/Kg	27.7		5	9.9	ug/Kg
Benzo(a)pyrene	10.6		4	7.91	ug/Kg	279		4.9	9.78	ug/Kg	31.9		5	9.9	ug/Kg
Benzo(b)fluoranthene	11.9		4	7.91	ug/Kg	328		4.9	9.78	ug/Kg	33.9		5	9.9	ug/Kg
Benzo(g,h,i)perylene		<MDL	4	7.91	ug/Kg	359		4.9	9.78	ug/Kg	24.6		5	9.9	ug/Kg
Benzo(k)fluoranthene	11.8		4	7.91	ug/Kg	342		4.9	9.78	ug/Kg	35.1		5	9.9	ug/Kg
Benzoic Acid	241		20	39.5	ug/Kg	350		24	48.9	ug/Kg	418		25	49.5	ug/Kg
Benzyl Alcohol		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Benzyl Butyl Phthalate		<MDL	7.9	15.8	ug/Kg	128		9.8	19.6	ug/Kg	87.9		9.9	19.8	ug/Kg
Bis(2-Chloroethoxy)Methane		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Bis(2-Chloroethyl)Ether		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Bis(2-Chloroisopropyl)Ether		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Bis(2-ethylhexyl)adipate	57.1		20	39.5	ug/Kg	56		24	48.9	ug/Kg	90.1		25	49.5	ug/Kg
Bis(2-Ethylhexyl)Phthalate	73.9	B	7.9	15.8	ug/Kg	924		9.8	19.6	ug/Kg	186	B	9.9	19.8	ug/Kg
Bisphenol A		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
Caffeine		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Carbazole		<MDL	4	7.91	ug/Kg	24		4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Chrysene	20.6		4	7.91	ug/Kg	252		4.9	9.78	ug/Kg	33.9		5	9.9	ug/Kg
Coprostanol		<MDL	79	158	ug/Kg		<MDL	98	196	ug/Kg		<MDL	99	198	ug/Kg
Dibenzo(a,h)anthracene		<MDL	4	7.91	ug/Kg	109		4.9	9.78	ug/Kg	6.7	<RDL	5	9.9	ug/Kg
Dibenzofuran		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Diethyl Phthalate		<MDL	7.9	15.8	ug/Kg	21.9		9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Dimethyl Phthalate		<MDL	7.9	15.8	ug/Kg	35.5		9.8	19.6	ug/Kg	42.6		9.9	19.8	ug/Kg
Di-N-Butyl Phthalate	14	<RDL,B	7.9	15.8	ug/Kg	41.1	B	9.8	19.6	ug/Kg	16	<RDL,B	9.9	19.8	ug/Kg
Di-N-Octyl Phthalate		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Fluoranthene	30.6		4	7.91	ug/Kg	333		4.9	9.78	ug/Kg	52.5		5	9.9	ug/Kg
Fluorene		<MDL	4	7.91	ug/Kg	5.4	<RDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Hexachlorobenzene		<MDL	0.2	0.395	ug/Kg		<MDL	0.24	0.489	ug/Kg		<MDL	0.25	0.495	ug/Kg
Hexachlorobutadiene		<MDL	0.99	1.98	ug/Kg		<MDL	1.2	2.44	ug/Kg		<MDL	1.2	2.48	ug/Kg
Hexachloroethane		<MDL	2	3.95	ug/Kg		<MDL	2.4	4.89	ug/Kg		<MDL	2.5	4.95	ug/Kg
Indeno(1,2,3-Cd)Pyrene		<MDL	4	7.91	ug/Kg	318		4.9	9.78	ug/Kg	24.4		5	9.9	ug/Kg
Isophorone		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
Naphthalene		<MDL	4	7.91	ug/Kg		<MDL	4.9	9.78	ug/Kg		<MDL	5	9.9	ug/Kg
Nitrobenzene		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
N-Nitrosodimethylamine		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
N-Nitrosodi-N-Propylamine		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
N-Nitrosodiphenylamine		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Pentachlorophenol		<MDL	20	39.5	ug/Kg		<MDL	24	48.9	ug/Kg		<MDL	25	49.5	ug/Kg
Phenanthrene	17.8		4	7.91	ug/Kg	123		4.9	9.78	ug/Kg	26.5		5	9.9	ug/Kg
Phenol		<MDL	7.9	15.8	ug/Kg		<MDL	9.8	19.6	ug/Kg		<MDL	9.9	19.8	ug/Kg
Pyrene	28.5		4	7.91	ug/Kg	452		4.9	9.78	ug/Kg	67.6		5	9.9	ug/Kg
Total 4-Nonylphenol		<MDL	40	79.1	ug/Kg		<MDL	49	97.8	ug/Kg		<MDL	50	99	ug/Kg
OR TERNS (2002)															
Estradiol		<MDL	0.099	0.996	ug/Kg		<MDL	0.12	1.23	ug/Kg		<MDL	0.12	1.25	ug/Kg
Estrone	0.13	<RDL	0.059	0.597	ug/Kg	0.13	<RDL	0.073	0.738	ug/Kg	0.25	<RDL	0.074	0.748	ug/Kg
Ethynyl estradiol		<MDL	0.099	0.996	ug/Kg		<MDL	0.12	1.23	ug/Kg		<MDL	0.12	1.25	ug/Kg
OR WDOE NWTPH-DX															
Diesel Range (>C12-C24)															
Lube Oil Range (>C24)	55		49	49	mg/Kg	830		61	61	mg/Kg	250		62	62	mg/Kg
* Not converted to dry weight basis															

King County Environmental Laboratory Batch Report

WG104244 (AVS for Streams Sediments) Department: 3 - Conventionals Move Date: 24-AUG-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 11:10	8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-2	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 9:50	8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-3	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 12:10	8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-4	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 12:40	8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-5	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 13:00	8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-6	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 13:22	8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-7	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 13:55	8/20/2009 10:35	8/20/2009 12:47	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-8	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 14:25	8/20/2009 10:35	8/20/2009 12:47	WG104244-1, -2, -3, -4, -5, -6, -7	
L48629-9	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 15:15	8/20/2009 10:35	8/20/2009 12:47	WG104244-1, -2, -3, -4, -5, -6, -7	
L48633-6	421240C	STREAMS (sediment)	CVAVS	FRSHWTRSED	8/10/2009 11:40	8/20/2009 10:35	8/20/2009 12:47	WG104244-1, -2, -3, -4, -5, -6, -7	
WG104244-1	MB		CVAVS	OTHR SOLID		8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	MB1 8/19/09 10:55
WG104244-2	SB		CVAVS	OTHR SOLID		8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	WG104244-1
WG104244-3	LD		CVAVS	FRSHWTRSED		8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	L48629-3
WG104244-4	LT		CVAVS	FRSHWTRSED		8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	WG104244-3 L48629-3
WG104244-5	MS		CVAVS	FRSHWTRSED		8/19/2009 10:55	8/19/2009 13:50	WG104244-1, -2, -3, -4, -5, -6, -7	L48629-3
WG104244-6	MB		CVAVS	OTHR SOLID		8/20/2009 10:35	8/20/2009 12:47	WG104244-1, -2, -3, -4, -5, -6, -7	MB1 8/20/09 10:35
WG104244-7	SB		CVAVS	OTHR SOLID		8/20/2009 10:35	8/20/2009 12:47	WG104244-1, -2, -3, -4, -5, -6, -7	WG104244-6

King County Environmental Laboratory Batch Report

WG105536 (NH3-KCL STREAMS SEDS) Department: 3 - Conventionals Move Date: 07-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 11:10	10/20/2009 10:03	10/26/2009 15:16	WG105536-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 9:50	10/20/2009 10:03	10/26/2009 14:28	WG105536-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 12:10	10/20/2009 10:03	10/26/2009 14:30	WG105536-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 12:40	10/20/2009 10:03	10/26/2009 14:32	WG105536-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 13:00	10/20/2009 10:03	10/26/2009 14:34	WG105536-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 13:22	10/20/2009 10:03	10/26/2009 14:36	WG105536-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 13:55	10/20/2009 10:03	10/26/2009 14:38	WG105536-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 14:25	10/20/2009 10:03	10/26/2009 14:57	WG105536-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 15:15	10/20/2009 10:03	10/26/2009 14:59	WG105536-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 12:25	10/20/2009 10:03	10/26/2009 15:30	WG105536-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 14:15	10/20/2009 10:03	10/26/2009 15:01	WG105536-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 11:15	10/20/2009 10:03	10/26/2009 16:25	WG105536-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 13:30	10/20/2009 10:03	10/26/2009 15:03	WG105536-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 13:00	10/20/2009 10:03	10/26/2009 15:05	WG105536-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 11:40	10/20/2009 10:03	10/26/2009 15:08	WG105536-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/10/2009 8:55	10/20/2009 10:03	10/26/2009 15:10	WG105536-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 9:10	10/20/2009 10:03	10/26/2009 15:12	WG105536-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	CVNH3-KCL-FL	FRSHWTRSED	8/12/2009 10:05	10/20/2009 10:03	10/26/2009 15:14	WG105536-1, -2, -3, -4, -5, -6	
WG105536-1	MB		CVNH3-KCL-FL	OTHR SOLID		10/20/2009 10:03	10/26/2009 14:05	WG105536-1, -2, -3, -4, -5, -6	MB1 10/20/09
WG105536-2	SB		CVNH3-KCL-FL	OTHR SOLID		10/20/2009 10:03	10/26/2009 14:07	WG105536-1, -2, -3, -4, -5, -6	WG105536-1
WG105536-3	LCS		CVNH3-KCL-FL	OTHR SOLID		10/26/2009 15:45	10/26/2009 15:45	WG105536-1, -2, -3, -4, -5, -6	LEVEL1
WG105536-4	LD		CVNH3-KCL-FL	FRSHWTRSED		10/20/2009 10:03	10/26/2009 16:27	WG105536-1, -2, -3, -4, -5, -6	L48633-3
WG105536-5	LT		CVNH3-KCL-FL	FRSHWTRSED		10/20/2009 10:03	10/26/2009 16:29	WG105536-1, -2, -3, -4, -5, -6	WG105536-4 L48633-3
WG105536-6	MS		CVNH3-KCL-FL	FRSHWTRSED		10/20/2009 10:03	10/26/2009 16:31	WG105536-1, -2, -3, -4, -5, -6	L48633-3

King County Environmental Laboratory Batch Report

WG105172 (ORTHOP-OL 421240C STRE) Department: 3 - Conventionals Move Date: 07-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 11:10	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 9:50	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 12:10	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 12:40	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 13:00	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 13:22	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 13:55	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 14:25	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 15:15	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 12:25	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 14:15	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 11:15	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 13:30	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 13:00	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 11:40	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/10/2009 8:55	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 9:10	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	CVORTHOP-OL	FRSHWTRSED	8/12/2009 10:05	10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	
WG105172-1	MB		CVORTHOP-OL	OTHR SOLID		10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	MB1 10/06/09
WG105172-2	SB		CVORTHOP-OL	OTHR SOLID		10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	WG105172-1
WG105172-3	LCS		CVORTHOP-OL	OTHR SOLID		10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	LEVEL1
WG105172-4	LD		CVORTHOP-OL	FRSHWTRSED		10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	L48629-6
WG105172-5	LT		CVORTHOP-OL	FRSHWTRSED		10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	WG105172-4 L48629-6
WG105172-6	MS		CVORTHOP-OL	FRSHWTRSED		10/6/2009 8:35	10/6/2009 13:31	WG105172-1, -2, -3, -4, -5, -6	L48629-6

King County Environmental Laboratory Batch Report

WG104050 (sed ph for 421240) Department: 3 - Conventionals Move Date: 29-OCT-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 11:10	8/11/2009 13:45	8/11/2009 16:40	WG104050-2, -3	
L48629-2	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 9:50	8/11/2009 13:45	8/11/2009 16:45	WG104050-2, -3	
L48629-3	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 12:10	8/11/2009 13:45	8/11/2009 16:51	WG104050-2, -3	
L48629-4	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 12:40	8/11/2009 13:45	8/11/2009 16:56	WG104050-2, -3	
L48629-5	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 13:00	8/11/2009 13:45	8/11/2009 17:00	WG104050-2, -3	
L48629-6	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 13:22	8/11/2009 13:50	8/11/2009 17:09	WG104050-2, -3	
L48629-7	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 13:55	8/11/2009 13:45	8/11/2009 17:13	WG104050-2, -3	
L48629-8	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 14:25	8/11/2009 13:45	8/11/2009 17:20	WG104050-2, -3	
L48629-9	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 15:15	8/11/2009 13:45	8/11/2009 17:25	WG104050-2, -3	
L48633-6	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 11:40	8/11/2009 13:45	8/11/2009 17:29	WG104050-2, -3	
L48633-7	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/10/2009 8:55	8/11/2009 13:45	8/11/2009 17:42	WG104050-2, -3	
WG104050-1	CS		CVPH	BLANK WTR		8/11/2009 13:45	8/11/2009 16:35	WG104050-1	LEVEL1
WG104050-2	LD		CVPH	FRSHWTRSED		8/11/2009 13:45	8/11/2009 17:33	WG104050-2, -3	L48633-6
WG104050-3	LT		CVPH	FRSHWTRSED		8/11/2009 13:45	8/11/2009 17:39	WG104050-2, -3	WG104050-2 L48633-6

King County Environmental Laboratory Batch Report

WG104126 (ph for 421240) Department: 3 - Conventionals Move Date: 09-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48633-1	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 12:25	8/13/2009 16:05	8/13/2009 16:05	WG104126-2, -3	
L48633-2	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 14:15	8/13/2009 16:09	8/13/2009 16:09	WG104126-2, -3	
L48633-3	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 11:15	8/13/2009 16:12	8/13/2009 16:12	WG104126-2, -3	
L48633-4	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 13:30	8/13/2009 16:20	8/13/2009 16:20	WG104126-2, -3	
L48633-5	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 13:00	8/13/2009 16:24	8/13/2009 16:24	WG104126-2, -3	
L48633-8	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 9:10	8/13/2009 16:27	8/13/2009 16:27	WG104126-2, -3	
L48633-9	421240C	STREAMS (sediment)	CVPH	FRSHWTRSED	8/12/2009 10:05	8/13/2009 16:35	8/13/2009 16:35	WG104126-2, -3	
WG104126-1	CS		CVPH	BLANK WTR		8/13/2009 15:59	8/13/2009 15:59	WG104126-1	LEVEL1
WG104126-2	LD		CVPH	FRSHWTRSED		8/13/2009 16:14	8/13/2009 16:14	WG104126-2, -3	L48633-3
WG104126-3	LT		CVPH	FRSHWTRSED		8/13/2009 16:17	8/13/2009 16:17	WG104126-2, -3	WG104126-2 L48633-3

King County Environmental Laboratory Batch Report

WG104481 (PSD) Department: 3 - Conventionals Move Date: 06-NOV-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 11:10	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48629-2	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 9:50	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48629-3	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 12:10	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48629-4	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 12:40	10/13/2009 0:00	10/14/2009 0:00	WG104481-1, -2	
L48629-5	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 13:00	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48629-6	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 13:22	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48629-7	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 13:55	10/13/2009 0:00	10/14/2009 0:00	WG104481-1, -2	
L48629-8	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 14:25	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48629-9	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 15:15	9/28/2009 0:00	9/29/2009 0:00	WG104481-1, -2	
L48633-1	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 12:25	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-2	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 14:15	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-3	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 11:15	10/13/2009 0:00	10/14/2009 0:00	WG104481-1, -2	
L48633-4	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 13:30	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-5	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 13:00	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-6	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 11:40	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-7	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/10/2009 8:55	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-8	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 9:10	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
L48633-9	421240C	STREAMS (sediment)	CVPSD	FRSHWTRSED	8/12/2009 10:05	10/26/2009 0:00	10/29/2009 0:00	WG104481-1, -2	
WG104481-1	LD		CVPSD	FRSHWTRSED		10/13/2009 0:00	10/14/2009 0:00	WG104481-1, -2	L48633-3
WG104481-2	LT		CVPSD	FRSHWTRSED		10/13/2009 0:00	10/14/2009 0:00	WG104481-1, -2	WG104481-1 L48633-3

King County Environmental Laboratory Batch Report

WG104513 (TOC/Streams Sed) Department: 3 - Conventionals Move Date: 07-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 11:10	8/31/2009 14:30	12/3/2009 11:23	WG104513-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 9:50	8/31/2009 14:30	12/3/2009 11:46	WG104513-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 12:10	8/31/2009 14:30	12/3/2009 12:08	WG104513-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 12:40	8/31/2009 14:30	12/3/2009 12:36	WG104513-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 13:00	8/31/2009 14:30	12/3/2009 12:58	WG104513-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 13:22	8/31/2009 14:30	12/3/2009 13:28	WG104513-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 13:55	8/31/2009 14:30	12/3/2009 13:57	WG104513-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 14:25	8/31/2009 14:30	12/3/2009 14:21	WG104513-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 15:15	8/31/2009 14:30	12/3/2009 14:43	WG104513-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 12:25	8/31/2009 14:30	12/2/2009 13:48	WG104513-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 14:15	8/31/2009 14:30	12/3/2009 15:06	WG104513-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 11:15	8/31/2009 14:30	12/4/2009 8:47	WG104513-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 13:30	8/31/2009 14:30	12/4/2009 9:12	WG104513-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 13:00	8/31/2009 14:30	12/4/2009 9:38	WG104513-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 11:40	8/31/2009 14:30	12/4/2009 10:02	WG104513-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/10/2009 8:55	8/31/2009 14:30	12/4/2009 10:24	WG104513-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 9:10	8/31/2009 14:30	12/4/2009 11:16	WG104513-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	CVTOC	FRSHWTRSED	8/12/2009 10:05	8/31/2009 14:30	12/4/2009 11:38	WG104513-1, -2, -3, -4, -5, -6	
WG104513-1	MB		CVTOC	OTHR SOLID		12/2/2009 12:26	12/2/2009 12:26	WG104513-1, -2, -3, -4, -5, -6	MB1 091202
WG104513-2	SRM		CVTOC	OTHR SOLID		12/2/2009 12:44	12/2/2009 12:44	WG104513-1, -2, -3, -4, -5, -6	HICONC
WG104513-3	SB		CVTOC	OTHR SOLID		12/2/2009 13:04	12/2/2009 13:04	WG104513-1, -2, -3, -4, -5, -6	WG104513-1
WG104513-4	LD		CVTOC	FRSHWTRSED		8/31/2009 14:30	12/2/2009 14:13	WG104513-1, -2, -3, -4, -5, -6	L48633-1
WG104513-5	LT		CVTOC	FRSHWTRSED		8/31/2009 14:30	12/2/2009 14:34	WG104513-1, -2, -3, -4, -5, -6	WG104513-4 L48633-1
WG104513-6	MS		CVTOC	FRSHWTRSED		8/31/2009 14:30	12/2/2009 15:23	WG104513-1, -2, -3, -4, -5, -6	L48633-1

King County Environmental Laboratory Batch Report

WG104515 (TOTS/421240 Streams Sed) Department: 3 - Conventionals Move Date: 08-SEP-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 11:10	8/31/2009 13:21	9/1/2009 8:57	WG104515-1, -2, -3	
L48629-2	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 9:50	8/31/2009 13:21	9/1/2009 8:58	WG104515-1, -2, -3	
L48629-3	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 12:10	8/31/2009 13:21	9/1/2009 8:58	WG104515-1, -2, -3	
L48629-4	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 12:40	8/31/2009 13:21	9/1/2009 8:59	WG104515-1, -2, -3	
L48629-5	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 13:00	8/31/2009 13:21	9/1/2009 9:00	WG104515-1, -2, -3	
L48629-6	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 13:22	8/31/2009 13:21	9/1/2009 9:02	WG104515-1, -2, -3	
L48629-7	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 13:55	8/31/2009 13:21	9/1/2009 9:03	WG104515-1, -2, -3	
L48629-8	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 14:25	8/31/2009 13:21	9/1/2009 9:05	WG104515-1, -2, -3	
L48629-9	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 15:15	8/31/2009 13:21	9/1/2009 9:05	WG104515-1, -2, -3	
L48633-1	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 12:25	8/31/2009 13:21	9/1/2009 9:06	WG104515-1, -2, -3	
L48633-2	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 14:15	8/31/2009 13:21	9/1/2009 9:06	WG104515-1, -2, -3	
L48633-3	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 11:15	8/31/2009 13:21	9/1/2009 9:07	WG104515-1, -2, -3	
L48633-4	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 13:30	8/31/2009 13:21	9/1/2009 9:08	WG104515-1, -2, -3	
L48633-5	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 13:00	8/31/2009 13:21	9/1/2009 9:08	WG104515-1, -2, -3	
L48633-6	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 11:40	8/31/2009 13:21	9/1/2009 9:08	WG104515-1, -2, -3	
L48633-7	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/10/2009 8:55	8/31/2009 13:21	9/1/2009 9:09	WG104515-1, -2, -3	
L48633-8	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 9:10	8/31/2009 13:21	9/1/2009 9:09	WG104515-1, -2, -3	
L48633-9	421240C	STREAMS (sediment)	CVTOTS	FRSHWTRSED	8/12/2009 10:05	8/31/2009 13:21	9/1/2009 9:10	WG104515-1, -2, -3	
WG104515-1	MB		CVTOTS	OTHR SOLID		8/31/2009 13:21	9/1/2009 8:57	WG104515-1, -2, -3	MB1 090831
WG104515-2	LD		CVTOTS	FRSHWTRSED		8/31/2009 13:21	9/1/2009 9:03	WG104515-1, -2, -3	L48629-7
WG104515-3	LT		CVTOTS	FRSHWTRSED		8/31/2009 13:21	9/1/2009 9:04	WG104515-1, -2, -3	WG104515-2 L48629-7

King County Environmental Laboratory Batch Report

WG104497 (STREAMS SEDIMENT (FRESHWA) Department: 6 - Metals Move Date: 15-SEP-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 11:10	8/31/2009 8:35	8/31/2009 14:10	WG104497-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 9:50	8/31/2009 8:35	8/31/2009 14:12	WG104497-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 12:10	8/31/2009 8:35	8/31/2009 14:13	WG104497-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 12:40	8/31/2009 8:35	8/31/2009 14:19	WG104497-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 13:00	8/31/2009 8:35	8/31/2009 14:21	WG104497-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 13:22	8/31/2009 8:35	8/31/2009 14:22	WG104497-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 13:55	8/31/2009 8:35	8/31/2009 14:24	WG104497-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 14:25	8/31/2009 8:35	8/31/2009 14:26	WG104497-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 15:15	8/31/2009 8:35	8/31/2009 14:28	WG104497-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 12:25	8/31/2009 8:35	8/31/2009 14:03	WG104497-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 14:15	8/31/2009 8:35	8/31/2009 14:30	WG104497-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 11:15	8/31/2009 8:35	8/31/2009 14:31	WG104497-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 13:30	8/31/2009 8:35	8/31/2009 14:33	WG104497-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 13:00	8/31/2009 8:35	8/31/2009 14:35	WG104497-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 11:40	8/31/2009 8:35	8/31/2009 14:40	WG104497-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/10/2009 8:55	8/31/2009 8:35	8/31/2009 14:42	WG104497-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 9:10	8/31/2009 8:35	8/31/2009 14:44	WG104497-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	MTHG-MIDS	FRSHWTRSED	8/12/2009 10:05	8/31/2009 8:35	8/31/2009 14:46	WG104497-1, -2, -3, -4, -5, -6	
WG104497-1	LCS		MTHG-MIDS	FRSHWTRSED		8/31/2009 8:35	8/31/2009 13:57	WG104497-1, -2, -3, -4, -5, -6	WQB1
WG104497-2	MB		MTHG-MIDS	SOLIDBLANK		8/31/2009 8:35	8/31/2009 13:59	WG104497-1, -2, -3, -4, -5, -6	METHOD BLANK
WG104497-3	SB		MTHG-MIDS	SOLIDBLANK		8/31/2009 8:35	8/31/2009 14:01	WG104497-1, -2, -3, -4, -5, -6	WG104497-2 HG-SMID
WG104497-4	MS		MTHG-MIDS	FRSHWTRSED		8/31/2009 8:35	8/31/2009 14:04	WG104497-1, -2, -3, -4, -5, -6	L48633-1 HG-SMID
WG104497-5	MSD		MTHG-MIDS	FRSHWTRSED		8/31/2009 8:35	8/31/2009 14:06	WG104497-1, -2, -3, -4, -5, -6	WG104497-4 L48633-1 HG-SMID-MSD
WG104497-6	LD		MTHG-MIDS	FRSHWTRSED		8/31/2009 8:35	8/31/2009 14:08	WG104497-1, -2, -3, -4, -5, -6	L48633-1 RPD-SOL

King County Environmental Laboratory Batch Report

WG104351 (STREAMS SEDIMENT - SEM) Department: 6 - Metals Move Date: 15-SEP-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 11:10	8/25/2009 8:10	8/25/2009 13:27	WG104351-1, -2, -3, -4, -5	
L48629-2	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 9:50	8/25/2009 8:10	8/25/2009 13:29	WG104351-1, -2, -3, -4, -5	
L48629-3	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 12:10	8/25/2009 8:10	8/25/2009 13:18	WG104351-1, -2, -3, -4, -5	
L48629-4	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 12:40	8/25/2009 8:10	8/25/2009 13:31	WG104351-1, -2, -3, -4, -5	
L48629-5	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 13:00	8/25/2009 8:10	8/25/2009 13:36	WG104351-1, -2, -3, -4, -5	
L48629-6	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 13:22	8/25/2009 8:10	8/25/2009 13:38	WG104351-1, -2, -3, -4, -5	
L48629-7	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 13:55	8/25/2009 8:10	8/25/2009 13:40	WG104351-1, -2, -3, -4, -6	
L48629-8	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 14:25	8/25/2009 8:10	8/25/2009 13:41	WG104351-1, -2, -3, -4, -6	
L48629-9	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 15:15	8/25/2009 8:10	8/25/2009 13:43	WG104351-1, -2, -3, -4, -6	
L48633-6	421240C	STREAMS (sediment)	MTHG-SEM	FRSHWTRSED	8/10/2009 11:40	8/25/2009 8:10	8/25/2009 13:45	WG104351-1, -2, -3, -4, -6	
WG104351-1	MB		MTHG-SEM	SOLIDBLANK		8/25/2009 8:10	8/25/2009 13:14	WG104351-1, -2, -3, -4, -5, -6	METHOD BLANK
WG104351-2	SB		MTHG-SEM	SOLIDBLANK		8/25/2009 8:10	8/25/2009 13:16	WG104351-1, -2, -3, -4, -5, -6	WG104351-1 HG-SMID
WG104351-3	MS		MTHG-SEM	FRSHWTRSED		8/25/2009 8:10	8/25/2009 13:20	WG104351-1, -2, -3, -4, -5	L48629-3 HG-SMID
WG104351-4	LD		MTHG-SEM	FRSHWTRSED		8/25/2009 8:10	8/25/2009 13:21	WG104351-1, -2, -3, -4, -5	L48629-3 RPD-SOL
WG104351-5	MB		MTHG-SEM	SOLIDBLANK		8/25/2009 8:10	8/25/2009 13:23	WG104351-1, -2, -3, -4, -5	EXTRACTION BLANK 090819
WG104351-6	MB		MTHG-SEM	SOLIDBLANK		8/25/2009 8:10	8/25/2009 13:25	WG104351-1, -2, -3, -4, -6	EXTRACTION BLANK 090820

King County Environmental Laboratory Batch Report

WG104314 (SEM 24-AUG-09) Department: 6 - Metals Move Date: 18-SEP-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 11:10	8/24/2009 9:00	8/24/2009 10:51	WG104314-1, -2, -5, -4, -3	
L48629-2	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 9:50	8/24/2009 9:00	8/24/2009 10:57	WG104314-1, -2, -5, -4, -3	
L48629-3	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 12:10	8/24/2009 9:00	8/24/2009 11:02	WG104314-1, -2, -5, -4, -3	
L48629-4	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 12:40	8/24/2009 9:00	8/24/2009 11:19	WG104314-1, -2, -5, -4, -3	
L48629-5	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 13:00	8/24/2009 9:00	8/24/2009 11:24	WG104314-1, -2, -5, -4, -3	
L48629-6	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 13:22	8/24/2009 9:00	8/24/2009 11:41	WG104314-1, -2, -5, -4, -3	
L48629-7	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 13:55	8/24/2009 9:00	8/24/2009 11:52	WG104314-1, -2, -4, -3, -6	
L48629-8	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 14:25	8/24/2009 9:00	8/24/2009 11:58	WG104314-1, -2, -4, -3, -6	
L48629-9	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 15:15	8/24/2009 9:00	8/24/2009 12:03	WG104314-1, -2, -4, -3, -6	
L48633-6	421240C	STREAMS (sediment)	MTICP-SEM	FRSHWTRSED	8/10/2009 11:40	8/24/2009 9:00	8/24/2009 12:09	WG104314-1, -2, -4, -3, -6	
WG104314-1	SB		MTICP-SEM	SOLIDBLANK		8/24/2009 9:00	8/24/2009 10:34	WG104314-1, -2, -5, -4, -3, -6	WG104314-2 ICPH
WG104314-2	MB		MTICP-SEM	SOLIDBLANK		8/24/2009 9:00	8/24/2009 10:40	WG104314-1, -2, -5, -4, -3, -6	METHOD BLANK
WG104314-3	LD		MTICP-SEM	FRSHWTRSED		8/24/2009 9:00	8/24/2009 11:13	WG104314-1, -2, -5, -4, -3	L48629-3 RPD-SOL
WG104314-4	MS		MTICP-SEM	FRSHWTRSED		8/24/2009 9:00	8/24/2009 11:08	WG104314-1, -2, -5, -4, -3	L48629-3 ICPH
WG104314-5	MB		MTICP-SEM	SOLIDBLANK		8/24/2009 9:00	8/24/2009 10:45	WG104314-1, -2, -5, -4, -3	EXTRACTION BLANK 081909
WG104314-6	MB		MTICP-SEM	SOLIDBLANK		8/24/2009 9:00	8/24/2009 11:46	WG104314-1, -2, -4, -3, -6	EXTRACTION BLANK 082009

King County Environmental Laboratory Batch Report

WG105676 (10/27/09 Streams Sediment) Department: 6 - Metals Move Date: 16-NOV-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 11:10	10/27/2009 8:00	11/2/2009 14:40	WG105676-1, -2, -5, -6, -3, -4	
L48629-2	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 9:50	10/27/2009 8:00	11/2/2009 14:45	WG105676-1, -2, -5, -6, -3, -4	
L48629-3	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 12:10	10/27/2009 8:00	11/2/2009 14:50	WG105676-1, -2, -5, -6, -3, -4	
L48629-4	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 12:40	10/27/2009 8:00	11/2/2009 14:56	WG105676-1, -2, -5, -6, -3, -4	
L48629-5	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 13:00	10/27/2009 8:00	11/2/2009 15:01	WG105676-1, -2, -5, -6, -3, -4	
L48629-6	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 13:22	10/27/2009 8:00	11/2/2009 15:06	WG105676-1, -2, -5, -6, -3, -4	
L48629-7	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 13:55	10/27/2009 8:00	11/2/2009 15:21	WG105676-1, -2, -5, -6, -3, -4	
L48629-8	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 14:25	10/27/2009 8:00	11/2/2009 15:37	WG105676-1, -2, -5, -6, -3, -4	
L48629-9	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 15:15	10/27/2009 8:00	11/2/2009 15:42	WG105676-1, -2, -5, -6, -3, -4	
L48633-1	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 12:25	10/27/2009 8:00	11/2/2009 15:47	WG105676-1, -2, -5, -6, -3, -4	
L48633-2	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 14:15	10/27/2009 8:00	11/2/2009 15:52	WG105676-1, -2, -5, -6, -3, -4	
L48633-3	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 11:15	10/27/2009 8:00	11/2/2009 15:57	WG105676-1, -2, -5, -6, -3, -4	
L48633-4	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 13:30	10/27/2009 8:00	11/2/2009 16:02	WG105676-1, -2, -5, -6, -3, -4	
L48633-5	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 13:00	10/27/2009 8:00	11/2/2009 16:08	WG105676-1, -2, -5, -6, -3, -4	
L48633-6	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 11:40	10/27/2009 8:00	11/2/2009 16:23	WG105676-1, -2, -5, -6, -3, -4	
L48633-7	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/10/2009 8:55	10/27/2009 8:00	11/2/2009 16:28	WG105676-1, -2, -5, -6, -3, -4	
L48633-8	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 9:10	10/27/2009 8:00	11/2/2009 16:33	WG105676-1, -2, -5, -6, -3, -4	
L48633-9	421240C	STREAMS (sediment)	MTICPMS-SED	FRSHWTRSED	8/12/2009 10:05	10/27/2009 8:00	11/2/2009 16:38	WG105676-1, -2, -5, -6, -3, -4	
WG105676-1	MB		MTICPMS-SED	SOLIDBLANK		10/27/2009 8:00	11/2/2009 14:19	WG105676-1, -2, -5, -6, -3, -4	METHOD BLANK
WG105676-2	SB		MTICPMS-SED	SOLIDBLANK		10/27/2009 8:00	11/2/2009 14:24	WG105676-1, -2, -5, -6, -3, -4	WG105676-1 MS-100 SPK BLK
WG105676-3	LD		MTICPMS-SED	FRSHWTRSED		10/27/2009 8:00	11/2/2009 15:26	WG105676-1, -2, -5, -6, -3, -4	L48629-7 RPD-SOL LAB DUP
WG105676-4	MS		MTICPMS-SED	FRSHWTRSED		10/27/2009 8:00	11/2/2009 15:32	WG105676-1, -2, -5, -6, -3, -4	L48629-7 MS-100 MAT SPK
WG105676-5	LCS		MTICPMS-SED	SOIL		10/27/2009 8:00	11/2/2009 14:30	WG105676-1, -2, -5, -6, -3, -4	ERASOIL LAB CONTROL SAMP
WG105676-6	LCS		MTICPMS-SED	FRSHWTRSED		10/27/2009 8:00	11/2/2009 14:35	WG105676-1, -2, -5, -6, -3, -4	BUFFSED LAB CONTROL SAMP

King County Environmental Laboratory Batch Report

WG104189 (bs#325 bnallfull) Department: 7 - Organics Move Date: 17-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 11:10	10/29/2009 8:00	11/19/2009 19:08	WG104189-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 9:50	10/29/2009 8:00	11/19/2009 19:54	WG104189-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 12:10	10/29/2009 8:00	11/19/2009 20:40	WG104189-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 12:40	10/29/2009 8:00	11/20/2009 0:16	WG104189-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 13:00	10/29/2009 8:00	11/20/2009 1:02	WG104189-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 13:22	10/29/2009 8:00	11/20/2009 1:48	WG104189-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 13:55	10/29/2009 8:00	11/20/2009 2:34	WG104189-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 14:25	10/29/2009 8:00	11/20/2009 3:20	WG104189-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 15:15	10/29/2009 8:00	11/20/2009 4:07	WG104189-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 12:25	10/29/2009 8:00	11/20/2009 4:53	WG104189-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 14:15	10/29/2009 8:00	11/20/2009 5:39	WG104189-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 11:15	10/29/2009 8:00	11/20/2009 6:25	WG104189-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 13:30	10/29/2009 8:00	11/20/2009 7:11	WG104189-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 13:00	10/29/2009 8:00	11/20/2009 7:57	WG104189-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 11:40	10/29/2009 8:00	11/20/2009 8:43	WG104189-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/10/2009 8:55	10/29/2009 8:00	11/20/2009 9:30	WG104189-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 9:10	10/29/2009 8:00	11/20/2009 10:16	WG104189-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	ORBNALLFULL	FRSHWTRSED	8/12/2009 10:05	10/29/2009 8:00	11/20/2009 11:02	WG104189-1, -2, -3, -4, -5, -6	
WG104189-1	MB		ORBNALLFULL	OTHR SOLID		10/29/2009 8:00	11/19/2009 9:55	WG104189-1, -2, -3, -4, -5, -6	MB090818
WG104189-2	SB		ORBNALLFULL	OTHR SOLID		10/29/2009 8:00	11/19/2009 10:41	WG104189-1, -2, -3, -4, -5, -6	WG104189-1
WG104189-3	MS		ORBNALLFULL	FRSHWTRSED		10/29/2009 8:00	11/19/2009 16:03	WG104189-1, -2, -3, -4, -5, -6	L48633-1
WG104189-4	MSD		ORBNALLFULL	FRSHWTRSED		10/29/2009 8:00	11/19/2009 16:49	WG104189-1, -2, -3, -4, -5, -6	WG104189-3 L48633-1
WG104189-5	SRM		ORBNALLFULL	FRSHWTRSED		10/29/2009 8:00	11/19/2009 17:35	WG104189-1, -2, -3, -4, -5, -6	1944
WG104189-6	LD		ORBNALLFULL	FRSHWTRSED		10/29/2009 8:00	11/19/2009 18:21	WG104189-1, -2, -3, -4, -5, -6	L48629-8

King County Environmental Laboratory Batch Report

WG104190 (bs#325 edc) Department: 7 - Organics Move Date: 16-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 11:10	10/29/2009 8:00	11/19/2009 19:08	WG104190-1, -2, -3, -4, -6	
L48629-2	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 9:50	10/29/2009 8:00	11/19/2009 19:54	WG104190-1, -2, -3, -4, -6	
L48629-3	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 12:10	10/29/2009 8:00	11/19/2009 20:40	WG104190-1, -2, -3, -4, -6	
L48629-4	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 12:40	10/29/2009 8:00	11/20/2009 0:16	WG104190-1, -2, -3, -4, -6	
L48629-5	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 13:00	10/29/2009 8:00	11/20/2009 1:02	WG104190-1, -2, -3, -4, -6	
L48629-6	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 13:22	10/29/2009 8:00	11/20/2009 1:48	WG104190-1, -2, -3, -4, -6	
L48629-7	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 13:55	10/29/2009 8:00	11/20/2009 2:34	WG104190-1, -2, -3, -4, -6	
L48629-8	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 14:25	10/29/2009 8:00	11/20/2009 3:20	WG104190-1, -2, -3, -4, -6	
L48629-9	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 15:15	10/29/2009 8:00	11/20/2009 4:07	WG104190-1, -2, -3, -4, -6	
L48633-1	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 12:25	10/29/2009 8:00	11/20/2009 4:53	WG104190-1, -2, -3, -4, -6	
L48633-2	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 14:15	10/29/2009 8:00	11/20/2009 5:39	WG104190-1, -2, -3, -4, -6	
L48633-3	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 11:15	10/29/2009 8:00	11/20/2009 6:25	WG104190-1, -2, -3, -4, -6	
L48633-4	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 13:30	10/29/2009 8:00	11/20/2009 7:11	WG104190-1, -2, -3, -4, -6	
L48633-5	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 13:00	10/29/2009 8:00	11/20/2009 7:57	WG104190-1, -2, -3, -4, -6	
L48633-6	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 11:40	10/29/2009 8:00	11/20/2009 8:43	WG104190-1, -2, -3, -4, -6	
L48633-7	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/10/2009 8:55	10/29/2009 8:00	11/20/2009 9:30	WG104190-1, -2, -3, -4, -6	
L48633-8	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 9:10	10/29/2009 8:00	11/20/2009 10:16	WG104190-1, -2, -3, -4, -6	
L48633-9	421240C	STREAMS (sediment)	OREDC	FRSHWTRSED	8/12/2009 10:05	10/29/2009 8:00	11/20/2009 11:02	WG104190-1, -2, -3, -4, -6	
WG104190-1	MB		OREDC	OTHR SOLID		10/29/2009 8:00	11/19/2009 9:55	WG104190-1, -2, -3, -4, -6	MB090818
WG104190-2	SB		OREDC	OTHR SOLID		10/29/2009 8:00	11/19/2009 10:41	WG104190-1, -2, -3, -4, -6	WG104190-1
WG104190-3	MS		OREDC	FRSHWTRSED		10/29/2009 8:00	11/19/2009 16:03	WG104190-1, -2, -3, -4, -6	L48633-1
WG104190-4	MSD		OREDC	FRSHWTRSED		10/29/2009 8:00	11/19/2009 16:49	WG104190-1, -2, -3, -4, -6	WG104190-3 L48633-1
WG104190-6	LD		OREDC	FRSHWTRSED		10/29/2009 8:00	11/19/2009 18:21	WG104190-1, -2, -3, -4, -6	L48629-8

King County Environmental Laboratory Batch Report

WG104595 (EDCS#7 EDC-LVI) Department: 7 - Organics Move Date: 13-OCT-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 11:10	9/9/2009	10/1/2009 11:32	WG104595-1, -2, -3, -4, -5	
L48629-2	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 9:50		10/1/2009 12:02	WG104595-1, -2, -3, -4, -5	
L48629-3	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 12:10		10/1/2009 12:32	WG104595-1, -2, -3, -4, -5	
L48629-4	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 12:40		10/1/2009 13:03	WG104595-1, -2, -3, -4, -5	
L48629-5	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 13:00		10/1/2009 13:33	WG104595-1, -2, -3, -4, -5	
L48629-6	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 13:22		10/1/2009 14:03	WG104595-1, -2, -3, -4, -5	
L48629-7	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 13:55		10/1/2009 14:33	WG104595-1, -2, -3, -4, -5	
L48629-8	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 14:25		10/1/2009 15:03	WG104595-1, -2, -3, -4, -5	
L48629-9	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 15:15		10/1/2009 15:33	WG104595-1, -2, -3, -4, -5	
L48633-1	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 12:25		10/1/2009 11:02	WG104595-1, -2, -3, -4, -5	
L48633-2	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 14:15		10/1/2009 16:03	WG104595-1, -2, -3, -4, -5	
L48633-3	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 11:15		10/1/2009 16:33	WG104595-1, -2, -3, -4, -5	
L48633-4	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 13:30		10/1/2009 17:04	WG104595-1, -2, -3, -4, -5	
L48633-5	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 13:00		10/1/2009 17:34	WG104595-1, -2, -3, -4, -5	
L48633-6	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 11:40		10/2/2009 8:15	WG104595-1, -2, -3, -4, -5	
L48633-7	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/10/2009 8:55		10/2/2009 8:46	WG104595-1, -2, -3, -4, -5	
L48633-8	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 9:10		10/2/2009 9:16	WG104595-1, -2, -3, -4, -5	
L48633-9	421240C	STREAMS (sediment)	OREDC-LVI	FRSHWTRSED	8/12/2009 10:05		10/2/2009 9:46	WG104595-1, -2, -3, -4, -5	
WG104595-1	MB		OREDC-LVI	OTHR SOLID			10/1/2009 8:01	WG104595-1, -2, -3, -4, -5	MB090908
WG104595-2	SB		OREDC-LVI	OTHR SOLID			10/1/2009 8:32	WG104595-1, -2, -3, -4, -5	WG104595-1
WG104595-3	MS		OREDC-LVI	FRSHWTRSED			10/1/2009 9:02	WG104595-1, -2, -3, -4, -5	L48633-1
WG104595-4	MSD		OREDC-LVI	FRSHWTRSED			10/1/2009 9:32	WG104595-1, -2, -3, -4, -5	WG104595-3 L48633-1
WG104595-5	LD		OREDC-LVI	FRSHWTRSED			10/1/2009 10:32	WG104595-1, -2, -3, -4, -5	L48629-1

King County Environmental Laboratory Batch Report

WG104212 (pplls#82 pbde) Department: 7 - Organics Move Date: 07-JAN-10

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 11:10	8/19/2009 7:00	9/25/2009 22:32	WG104212-1, -2, -3, -4, -6, -5	
L48629-2	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 9:50	8/19/2009 7:00	9/25/2009 22:52	WG104212-1, -2, -3, -4, -6, -5	
L48629-3	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 12:10	8/19/2009 7:00	9/25/2009 23:12	WG104212-1, -2, -3, -4, -6, -5	
L48629-4	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 12:40	8/19/2009 7:00	9/25/2009 23:33	WG104212-1, -2, -3, -4, -6, -5	
L48629-5	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 13:00	8/19/2009 7:00	9/25/2009 23:53	WG104212-1, -2, -3, -4, -6, -5	
L48629-6	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 13:22	8/19/2009 7:00	9/26/2009 0:14	WG104212-1, -2, -3, -4, -6, -5	
L48629-7	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 13:55	8/19/2009 7:00	9/26/2009 0:34	WG104212-1, -2, -3, -4, -6, -5	
L48629-8	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 14:25	8/19/2009 7:00	9/26/2009 0:54	WG104212-1, -2, -3, -4, -6, -5	
L48629-9	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 15:15	8/19/2009 7:00	9/26/2009 1:15	WG104212-1, -2, -3, -4, -6, -5	
L48633-1	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 12:25	8/19/2009 7:00	9/26/2009 1:35	WG104212-1, -2, -3, -4, -6, -5	
L48633-2	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 14:15	8/19/2009 7:00	9/26/2009 1:56	WG104212-1, -2, -3, -4, -6, -5	
L48633-3	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 11:15	8/19/2009 7:00	9/26/2009 2:16	WG104212-1, -2, -3, -4, -6, -5	
L48633-4	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 13:30	8/19/2009 7:00	9/26/2009 2:36	WG104212-1, -2, -3, -4, -6, -5	
L48633-5	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 13:00	8/19/2009 7:00	9/26/2009 2:57	WG104212-1, -2, -3, -4, -6, -5	
L48633-6	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 11:40	8/19/2009 7:00	9/26/2009 3:17	WG104212-1, -2, -3, -4, -6, -5	
L48633-7	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/10/2009 8:55	8/19/2009 7:00	9/26/2009 3:38	WG104212-1, -2, -3, -4, -6, -5	
L48633-8	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 9:10	8/19/2009 7:00	9/26/2009 3:58	WG104212-1, -2, -3, -4, -6, -5	
L48633-9	421240C	STREAMS (sediment)	ORPBDE	FRSHWTRSED	8/12/2009 10:05	8/19/2009 7:00	9/26/2009 4:19	WG104212-1, -2, -3, -4, -6, -5	
WG104212-1	MB		ORPBDE	OTHR SOLID		8/19/2009 7:00	9/25/2009 20:29	WG104212-1, -2, -3, -4, -6, -5	MB090819
WG104212-2	SB		ORPBDE	OTHR SOLID		8/19/2009 7:00	9/25/2009 20:49	WG104212-1, -2, -3, -4, -6, -5	WG104212-1
WG104212-3	MS		ORPBDE	FRSHWTRSED		8/19/2009 7:00	9/25/2009 21:10	WG104212-1, -2, -3, -4, -6, -5	L48633-3
WG104212-4	MSD		ORPBDE	FRSHWTRSED		8/19/2009 7:00	9/25/2009 21:30	WG104212-1, -2, -3, -4, -6, -5	WG104212-3 L48633-3
WG104212-5	LCS		ORPBDE	OTHR SOLID		8/19/2009 7:00	9/25/2009 21:51	WG104212-5	2585
WG104212-6	LD		ORPBDE	FRSHWTRSED		8/19/2009 7:00	9/25/2009 22:11	WG104212-1, -2, -3, -4, -6, -5	L48629-8

King County Environmental Laboratory Batch Report

WG104211 (pps#422 pcbll) Department: 7 - Organics Move Date: 12-NOV-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 11:10	9/30/2009 7:00	10/22/2009 22:22	WG104211-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 9:50	9/30/2009 7:00	10/22/2009 23:04	WG104211-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 12:10	9/30/2009 7:00	10/22/2009 23:43	WG104211-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 12:40	9/30/2009 7:00	10/23/2009 0:22	WG104211-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 13:00	9/30/2009 7:00	10/23/2009 1:01	WG104211-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 13:22	9/30/2009 7:00	10/23/2009 1:40	WG104211-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 13:55	9/30/2009 7:00	10/23/2009 2:19	WG104211-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 14:25	9/30/2009 7:00	10/23/2009 2:58	WG104211-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 15:15	9/30/2009 7:00	10/23/2009 3:37	WG104211-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 12:25	9/30/2009 7:00	10/23/2009 6:18	WG104211-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 14:15	9/30/2009 7:00	10/23/2009 6:59	WG104211-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 11:15	9/30/2009 7:00	10/23/2009 7:40	WG104211-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 13:30	9/30/2009 7:00	10/23/2009 8:22	WG104211-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 13:00	9/30/2009 7:00	10/23/2009 9:03	WG104211-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 11:40	9/30/2009 7:00	10/23/2009 9:45	WG104211-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/10/2009 8:55	9/30/2009 7:00	10/23/2009 10:25	WG104211-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 9:10	9/30/2009 7:00	10/23/2009 11:06	WG104211-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	ORPCBLL	FRSHWTRSED	8/12/2009 10:05	9/30/2009 7:00	10/23/2009 11:48	WG104211-1, -2, -3, -4, -5, -6	
WG104211-1	MB		ORPCBLL	OTHR SOLID		9/30/2009 7:00	10/22/2009 16:12	WG104211-1, -2, -3, -4, -5, -6	MB090930
WG104211-2	SB		ORPCBLL	OTHR SOLID		9/30/2009 7:00	10/22/2009 17:35	WG104211-1, -2, -3, -4, -5, -6	WG104211-1
WG104211-3	MS		ORPCBLL	FRSHWTRSED		9/30/2009 7:00	10/22/2009 18:17	WG104211-1, -2, -3, -4, -5, -6	L48633-1
WG104211-4	MSD		ORPCBLL	FRSHWTRSED		9/30/2009 7:00	10/22/2009 18:58	WG104211-1, -2, -3, -4, -5, -6	WG104211-3 L48633-1
WG104211-5	SRM		ORPCBLL	FRSHWTRSED		9/30/2009 7:00	10/22/2009 19:39	WG104211-1, -2, -3, -4, -5, -6	HS-2
WG104211-6	LD		ORPCBLL	FRSHWTRSED		9/30/2009 7:00	10/22/2009 16:54	WG104211-1, -2, -3, -4, -5, -6	L48633-4

King County Environmental Laboratory Batch Report

WG104210 (pplls#82 pestll) Department: 7 - Organics Move Date: 12-NOV-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 11:10	8/19/2009 7:00	9/17/2009 18:29	WG104210-1, -2, -3, -4, -5, -6	
L48629-2	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 9:50	8/19/2009 7:00	9/17/2009 19:06	WG104210-1, -2, -3, -4, -5, -6	
L48629-3	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 12:10	8/19/2009 7:00	9/17/2009 19:43	WG104210-1, -2, -3, -4, -5, -6	
L48629-4	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 12:40	8/19/2009 7:00	9/17/2009 22:12	WG104210-1, -2, -3, -4, -5, -6	
L48629-5	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 13:00	8/19/2009 7:00	9/17/2009 22:49	WG104210-1, -2, -3, -4, -5, -6	
L48629-6	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 13:22	8/19/2009 7:00	9/17/2009 23:26	WG104210-1, -2, -3, -4, -5, -6	
L48629-7	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 13:55	8/19/2009 7:00	9/18/2009 0:04	WG104210-1, -2, -3, -4, -5, -6	
L48629-8	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 14:25	8/19/2009 7:00	9/18/2009 0:41	WG104210-1, -2, -3, -4, -5, -6	
L48629-9	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 15:15	8/19/2009 7:00	9/18/2009 1:18	WG104210-1, -2, -3, -4, -5, -6	
L48633-1	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 12:25	8/19/2009 7:00	9/18/2009 1:55	WG104210-1, -2, -3, -4, -5, -6	
L48633-2	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 14:15	8/19/2009 7:00	9/18/2009 2:32	WG104210-1, -2, -3, -4, -5, -6	
L48633-3	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 11:15	8/19/2009 7:00	9/18/2009 3:10	WG104210-1, -2, -3, -4, -5, -6	
L48633-4	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 13:30	8/19/2009 7:00	9/18/2009 5:39	WG104210-1, -2, -3, -4, -5, -6	
L48633-5	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 13:00	8/19/2009 7:00	9/18/2009 6:16	WG104210-1, -2, -3, -4, -5, -6	
L48633-6	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 11:40	8/19/2009 7:00	9/18/2009 6:53	WG104210-1, -2, -3, -4, -5, -6	
L48633-7	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/10/2009 8:55	8/19/2009 7:00	9/18/2009 7:30	WG104210-1, -2, -3, -4, -5, -6	
L48633-8	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 9:10	8/19/2009 7:00	9/18/2009 8:07	WG104210-1, -2, -3, -4, -5, -6	
L48633-9	421240C	STREAMS (sediment)	ORPESTLL	FRSHWTRSED	8/12/2009 10:05	8/19/2009 7:00	9/18/2009 8:45	WG104210-1, -2, -3, -4, -5, -6	
WG104210-1	MB		ORPESTLL	OTHR SOLID		8/19/2009 7:00	9/17/2009 14:46	WG104210-1, -2, -3, -4, -5, -6	MB090819
WG104210-2	SB		ORPESTLL	OTHR SOLID		8/19/2009 7:00	9/17/2009 15:23	WG104210-1, -2, -3, -4, -5, -6	WG104210-1
WG104210-3	MS		ORPESTLL	FRSHWTRSED		8/19/2009 7:00	9/17/2009 16:00	WG104210-1, -2, -3, -4, -5, -6	L48633-1
WG104210-4	MSD		ORPESTLL	FRSHWTRSED		8/19/2009 7:00	9/17/2009 16:37	WG104210-1, -2, -3, -4, -5, -6	WG104210-3 L48633-1
WG104210-5	SRM		ORPESTLL	FRSHWTRSED		8/19/2009 7:00	9/17/2009 17:15	WG104210-1, -2, -3, -4, -5, -6	1944
WG104210-6	LD		ORPESTLL	FRSHWTRSED		8/19/2009 7:00	9/17/2009 17:52	WG104210-1, -2, -3, -4, -5, -6	L48629-2

King County Environmental Laboratory Batch Report

WG104158 (WTPH-DS#275) Department: 7 - Organics Move Date: 11-DEC-09

Sample	Project	Project Description	List Type	Matrix	Col. Date	Prep Date	Anal Date	QC Association	Comments
L48629-1	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 11:10	8/17/2009 10:00	9/18/2009 19:01	WG104158-1, -2, -3, -4, -5	
L48629-2	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 9:50	8/17/2009 10:00	9/18/2009 19:46	WG104158-1, -2, -3, -4, -5	
L48629-3	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 12:10	8/17/2009 10:00	9/18/2009 20:30	WG104158-1, -2, -3, -4, -5	
L48629-4	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 12:40	8/17/2009 10:00	9/18/2009 21:15	WG104158-1, -2, -3, -4, -5	
L48629-5	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 13:00	8/17/2009 10:00	9/19/2009 0:15	WG104158-1, -2, -3, -4, -5	
L48629-6	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 13:22	8/17/2009 10:00	9/19/2009 1:00	WG104158-1, -2, -3, -4, -5	
L48629-7	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 13:55	8/17/2009 10:00	9/19/2009 1:45	WG104158-1, -2, -3, -4, -5	
L48629-8	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 14:25	8/17/2009 10:00	9/19/2009 2:30	WG104158-1, -2, -3, -4, -5	
L48629-9	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 15:15	8/17/2009 10:00	9/19/2009 3:15	WG104158-1, -2, -3, -4, -5	
L48633-1	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 12:25	8/17/2009 10:00	9/19/2009 4:01	WG104158-1, -2, -3, -4, -5	
L48633-2	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 14:15	8/17/2009 10:00	9/19/2009 4:46	WG104158-1, -2, -3, -4, -5	
L48633-3	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 11:15	8/17/2009 10:00	9/19/2009 5:31	WG104158-1, -2, -3, -4, -5	
L48633-4	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 13:30	8/17/2009 10:00	9/19/2009 6:16	WG104158-1, -2, -3, -4, -5	
L48633-5	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 13:00	8/17/2009 10:00	9/19/2009 9:17	WG104158-1, -2, -3, -4, -5	
L48633-6	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 11:40	8/17/2009 10:00	9/19/2009 10:02	WG104158-1, -2, -3, -4, -5	
L48633-7	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/10/2009 8:55	8/17/2009 10:00	9/19/2009 10:47	WG104158-1, -2, -3, -4, -5	
L48633-8	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 9:10	8/17/2009 10:00	9/19/2009 11:32	WG104158-1, -2, -3, -4, -5	
L48633-9	421240C	STREAMS (sediment)	ORWTPH-DX	FRSHWTRSED	8/12/2009 10:05	8/17/2009 10:00	9/19/2009 12:17	WG104158-1, -2, -3, -4, -5	
WG104158-1	MB		ORWTPH-DX	OTHR SOLID		8/17/2009 10:00	9/18/2009 15:18	WG104158-1, -2, -3, -4, -5	MB090817
WG104158-2	SB		ORWTPH-DX	OTHR SOLID		8/17/2009 10:00	9/18/2009 16:02	WG104158-1, -2, -3, -4, -5	WG104158-1 SB-MO
WG104158-3	SB		ORWTPH-DX	OTHR SOLID		8/17/2009 10:00	9/18/2009 16:47	WG104158-1, -2, -3, -4, -5	WG104158-1 SB-DSL
WG104158-4	LD		ORWTPH-DX	FRSHWTRSED		8/17/2009 10:00	9/18/2009 17:32	WG104158-1, -2, -3, -4, -5	L48629-1
WG104158-5	LD		ORWTPH-DX	FRSHWTRSED		8/17/2009 10:00	9/18/2009 18:16	WG104158-1, -2, -3, -4, -5	L48633-1

* End of XX_14944B.xls

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104244 (AVS for Streams Sediments) Run ID: R137071

MB:WG104244-1 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991 Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG104244-2 MB:WG104244-1 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991 Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	<MDL	25.2	24.5	97		80--120

LT:WG104244-4 LD:WG104244-3 L48629-3 Matrix: FRSHWTRSED Listtype: CVAVS Method: EPA DEC 1991 Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Sulfide, Acid Volatile	0.25	0.994	mg/Kg	<MDL	<MDL	<MDL			20

MS:WG104244-5 L48629-3 Matrix: FRSHWTRSED Listtype: CVAVS Method: EPA DEC 1991 Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	9.95	mg/Kg	<MDL	25.1	13.1	52	*	65--135

MB:WG104244-6 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991 Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG104244-7 MB:WG104244-6 Matrix: OTHR SOLID Listtype: CVAVS Method: EPA DEC 1991 Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	2.5	10	mg/Kg	<MDL	24.4	24.1	99		80--120

King County Environmental Laboratory Analytical QC Report

Workgroup: WG105536 (NH3-KCL STREAMS SEDS) Run ID: R139071

MB:WG105536-1 Matrix: OTHR SOLID Listtype: CVNH3-KCL-FL Method: KEROUEL & AMINOT 1997(KCL) Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Ammonia Nitrogen	0.05	0.1	mg/Kg	<MDL	

SB:WG105536-2 MB:WG105536-1 Matrix: OTHR SOLID Listtype: CVNH3-KCL-FL Method: KEROUEL & AMINOT 1997(KCL) Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.5	1	mg/Kg	<MDL	10	10.6	106		80--120

LCS:WG105536-3 Matrix: OTHR SOLID Listtype: CVNH3-KCL-FL Method: KEROUEL & AMINOT 1997(KCL) Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.05	0.1	mg/Kg	1	0.995	100		80--120

LT:WG105536-5 LD:WG105536-4 L48633-3 Matrix: FRSHWTRSED Listtype: CVNH3-KCL-FL Method: KEROUEL & AMINOT 1997(KCL) Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Ammonia Nitrogen	0.98	1.97	mg/Kg	10.7	10.4	10.3	2		20

MS:WG105536-6 L48633-3 Matrix: FRSHWTRSED Listtype: CVNH3-KCL-FL Method: KEROUEL & AMINOT 1997(KCL) Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.98	1.95	mg/Kg	10.7	9.7652	20.1	96		75--125

King County Environmental Laboratory Analytical QC Report

Workgroup: WG105172 (ORTHOP-OL 421240C STRE) Run ID: R138490

MB:WG105172-1 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F OL Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	

SB:WG105172-2 MB:WG105172-1 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F OL Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	8	7.99	100		80--120

LCS:WG105172-3 Matrix: OTHR SOLID Listtype: CVORTHOP-OL Method: SM4500-P-F OL Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	16	16.2	101		80--120

LT:WG105172-5 LD:WG105172-4 L48629-6 Matrix: FRSHWTRSED Listtype: CVORTHOP-OL Method: SM4500-P-F OL Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Orthophosphate Phosphorus	0.99	2.46	mg/Kg	17.9	18.7	17.7	3		20

MS:WG105172-6 L48629-6 Matrix: FRSHWTRSED Listtype: CVORTHOP-OL Method: SM4500-P-F OL Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	17.9	7.99	24.8	86		70--130

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104050 (sed ph for 421240) Run ID: R138756

CS:WG104050-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B Project: NONE
(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.86	100		98--102

LT:WG104050-3 LD:WG104050-2 L48633-6 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	7.29	7.3	7.3	0		5

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104126 (ph for 421240) Run ID: R140206

CS:WG104126-1 Matrix: BLANK WTR Listtype: CVPH Method: SM4500-H-B Project: NONE
(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.89	100		98--102

LT:WG104126-3 LD:WG104126-2 L48633-3 Matrix: FRSHWTRSED Listtype: CVPH Method: SW846 9045C Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	6.96	6.86	6.92	1		5

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104481 (PSD) Run ID: R139256

LT:WG104481-2 LD:WG104481-1 L48633-3 Matrix: FRSHWTRSED Listtype: CVPSD Method: ASTM D422 Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Clay	0.93	1.85	%	<MDL	<MDL	<MDL			20
Gravel	0.19	1.85	%	<MDL	<MDL	<MDL			20
Sand	0.19	1.85	%	46.8	53.2	55.4	9		20
Silt	0.93	1.85	%	45.4	47.1	48.2	3		20

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104513 (TOC/Streams Sed) Run ID: R140144

MB:WG104513-1 Matrix: OTHR SOLID Listtype: CVTOC Method: SW846 9060-PSEP96 Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG104513-2 Matrix: OTHR SOLID Listtype: CVTOC Method: SW846 9060-PSEP96 Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	2600	5210	mg/Kg	33480	34200	102		80--120

SB:WG104513-3 MB:WG104513-1 Matrix: OTHR SOLID Listtype: CVTOC Method: SW846 9060-PSEP96 Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2710	108		80--120

LT:WG104513-5 LD:WG104513-4 L48633-1 Matrix: FRSHWTRSED Listtype: CVTOC Method: SW846 9060-PSEP96 Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Organic Carbon	370	740	mg/Kg	1500	1770	2100	17		20

MS:WG104513-6 L48633-1 Matrix: FRSHWTRSED Listtype: CVTOC Method: SW846 9060-PSEP96 Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	370	731	mg/Kg	1500	1826	3240	95		75--125

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104515 (TOTS/421240 Streams Sed) Run ID: R137393

MB:WG104515-1 Matrix: OTHR SOLID Listtype: CVTOTS Method: SM2540-G Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG104515-3 LD:WG104515-2 L48629-7 Matrix: FRSHWTRSED Listtype: CVTOTS Method: SM2540-G Project: 421240C
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Solids	0.005	0.01	%	64.8	65.7	68.7	3		20

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104497 (STREAMS SEDIMENT (FRESHWA) Run ID: R137381

LCS:WG104497-1 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: SW846 7471B Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.13	1.28	mg/Kg	1.09	0.99	90		80--120

MB:WG104497-2 Matrix: SOLIDBLANK Listtype: MTHG-MIDS Method: SW846 7471B Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.0048	0.0476	mg/Kg	<MDL	

SB:WG104497-3 MB:WG104497-2 Matrix: SOLIDBLANK Listtype: MTHG-MIDS Method: SW846 7471B Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.0048	0.0476	mg/Kg	<MDL	0.0952	0.0993	104		85--115

MSD:WG104497-5 MS:WG104497-4 L48633-1 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: SW846 7471B Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Mercury, Total, CVAA	0.0049	0.0493	mg/Kg	0.0063	0.1	0.105	99		75--125	0.0986	0.101	96		3		20

LD:WG104497-6 L48633-1 Matrix: FRSHWTRSED Listtype: MTHG-MIDS Method: SW846 7471B Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Mercury, Total, CVAA	0.0049	0.0489	mg/Kg	0.0063	0.0072			20

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104351 (STREAMS SEDIMENT - SEM) Run ID: R137270

MB:WG104351-1 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: EPA 245.1*SW846 7470A Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

SB:WG104351-2 MB:WG104351-1 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: EPA 245.1*SW846 7470A Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	0.02	0.0202	101		85--115

MS:WG104351-3 L48629-3 Matrix: FRSHWTRSED Listtype: MTHG-SEM Method: EPA 245.1*SW846 7470A Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.00299	mg/Kg	<MDL	0.02	0.0201	101		75--125

LD:WG104351-4 L48629-3 Matrix: FRSHWTRSED Listtype: MTHG-SEM Method: EPA 245.1*SW846 7470A Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Mercury, Extractable, SEM	0.00099	0.00297	mg/Kg	<MDL	<MDL			20

MB:WG104351-5 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: EPA 245.1*SW846 7470A Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

MB:WG104351-6 Matrix: SOLIDBLANK Listtype: MTHG-SEM Method: EPA 245.1*SW846 7470A Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104314 (SEM 24-AUG-09) Run ID: R137786

SB:WG104314-1 MB:WG104314-2 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: EPA 200.7 Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	20	19.1	96		85--115
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	20	19.5	98		85--115
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	20	19.2	96		85--115
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	19	95		85--115
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	20	18.8	94		85--115
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.8	94		85--115
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	19.2	96		85--115
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	19	95		85--115

MB:WG104314-2 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: EPA 200.7 Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

LD:WG104314-3 L48629-3 Matrix: FRSHWTRSED Listtype: MTICP-SEM Method: EPA 200.7 Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Arsenic, Extractable, SEM	0.49	2.47	mg/Kg	0.5	<MDL			20
Cadmium, Extractable, SEM	0.04	0.198	mg/Kg	<MDL	0.043			20
Chromium, Extractable, SEM	0.059	0.297	mg/Kg	0.547	0.552	1		20
Copper, Extractable, SEM	0.079	0.396	mg/Kg	2.27	2.12	7		20
Lead, Extractable, SEM	0.4	1.98	mg/Kg	1.4	1.5			20
Nickel, Extractable, SEM	0.099	0.495	mg/Kg	0.519	0.497	4		20
Silver, Extractable, SEM	0.079	0.396	mg/Kg	<MDL	<MDL			20
Zinc, Extractable, SEM	0.099	0.495	mg/Kg	10.7	10.1	6		20

King County Environmental Laboratory Analytical QC Report

MS:WG104314-4 L48629-3 Matrix: FRSHWTRSED Listtype: MTICP-SEM Method: EPA 200.7 Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	0.5	20	18.8	92		75--125
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	20	18.9	95		75--125
Chromium, Extractable, SEM	0.06	0.299	mg/Kg	0.547	20	19.1	93		75--125
Copper, Extractable, SEM	0.08	0.399	mg/Kg	2.27	20	20.9	94		75--125
Lead, Extractable, SEM	0.4	2	mg/Kg	1.4	20	19.6	91		75--125
Nickel, Extractable, SEM	0.1	0.499	mg/Kg	0.519	20	18.8	92		75--125
Silver, Extractable, SEM	0.08	0.399	mg/Kg	<MDL	20	18.8	94		75--125
Zinc, Extractable, SEM	0.1	0.499	mg/Kg	10.7	20	28.3	88		75--125

MB:WG104314-5 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: EPA 200.7 Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

MB:WG104314-6 Matrix: SOLIDBLANK Listtype: MTICP-SEM Method: EPA 200.7 Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

Workgroup: WG105676 (10/27/09 Streams Sediment) Run ID: R139236

MB:WG105676-1 Matrix: SOLIDBLANK Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project:
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Arsenic, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	
Cadmium, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	
Chromium, Total, ICP-MS	0.024	0.122	mg/Kg	<MDL	
Copper, Total, ICP-MS	0.049	0.244	mg/Kg	<MDL	
Lead, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	
Nickel, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	
Phosphorus, Total, ICP-MS	12	61	mg/Kg	<MDL	
Silver, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	
Zinc, Total, ICP-MS	0.061	0.305	mg/Kg	<MDL	

SB:WG105676-2 MB:WG105676-1 Matrix: SOLIDBLANK Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	2.44	2.66	109		85--115
Cadmium, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	2.44	2.53	104		85--115
Chromium, Total, ICP-MS	0.024	0.122	mg/Kg	<MDL	2.44	2.45	100		85--115
Copper, Total, ICP-MS	0.049	0.244	mg/Kg	<MDL	2.44	2.55	104		85--115
Lead, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	2.44	2.61	107		85--115
Nickel, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	2.44	2.52	103		85--115
Phosphorus, Total, ICP-MS	12	61	mg/Kg	<MDL	610	628	103		85--115
Silver, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	2.44	2.7	111		85--115
Zinc, Total, ICP-MS	0.061	0.305	mg/Kg	<MDL	2.44	2.56	105		85--115

LD:WG105676-3 L48629-7 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.012	0.0619	mg/Kg	1.97	1.95	1		20
Cadmium, Total, ICP-MS	0.0062	0.0309	mg/Kg	0.0569	0.0558	2		20
Chromium, Total, ICP-MS	0.25	1.24	mg/Kg	9.41	6.84	32	*	20
Copper, Total, ICP-MS	0.5	2.48	mg/Kg	8.48	9.15	8		20
Lead, Total, ICP-MS	0.012	0.0619	mg/Kg	3.65	3.82	5		20
Nickel, Total, ICP-MS	0.12	0.619	mg/Kg	5.46	4.89	11		20
Phosphorus, Total, ICP-MS	120	619	mg/Kg	310	300			20
Silver, Total, ICP-MS	0.0062	0.0309	mg/Kg	0.028	0.027			20
Zinc, Total, ICP-MS	0.62	3.09	mg/Kg	39.3	43.3	10		20

King County Environmental Laboratory Analytical QC Report

MS:WG105676-4 L48629-7 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: 421240C
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.012	0.0618	mg/Kg	1.97	2.47	4.8	114		75--125
Cadmium, Total, ICP-MS	0.0062	0.0309	mg/Kg	0.0569	2.47	2.53	100		75--125
Chromium, Total, ICP-MS	0.25	1.24	mg/Kg	9.41	2.47	10	25	*	75--125
Copper, Total, ICP-MS	0.49	2.47	mg/Kg	8.48	2.47	10.8	94		75--125
Lead, Total, ICP-MS	0.012	0.0618	mg/Kg	3.65	2.47	6.37	110		75--125
Nickel, Total, ICP-MS	0.12	0.618	mg/Kg	5.46	2.47	7.44	80		75--125
Phosphorus, Total, ICP-MS	120	618	mg/Kg	310	618	862	89		75--125
Silver, Total, ICP-MS	0.0062	0.0309	mg/Kg	0.028	2.47	2.51	100		75--125
Zinc, Total, ICP-MS	0.62	3.09	mg/Kg	39.3	2.47	47.6	MS/MSD %Rec. due to 4x rule)		

LCS:WG105676-5 Matrix: SOIL Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.1	0.512	mg/Kg	129	152	118		79--121
Cadmium, Total, ICP-MS	0.051	0.256	mg/Kg	68.3	69.1	101		80--120
Chromium, Total, ICP-MS	0.2	1.02	mg/Kg	70.4	70	99		73--127
Copper, Total, ICP-MS	0.41	2.05	mg/Kg	65.4	69.3	106		80--120
Lead, Total, ICP-MS	0.1	0.512	mg/Kg	131	135	103		80--120
Nickel, Total, ICP-MS	0.1	0.512	mg/Kg	55.4	57.4	104		80--120
Silver, Total, ICP-MS	0.051	0.256	mg/Kg	112	118	106		47--154
Zinc, Total, ICP-MS	0.51	2.56	mg/Kg	176	185	105		78--121

LCS:WG105676-6 Matrix: FRSHWTRSED Listtype: MTICPMS-SED Method: SW846 3050B*SW846 6020A Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Arsenic, Total, ICP-MS	0.1	0.512	mg/Kg	17	17.6	103		80--120
Cadmium, Total, ICP-MS	0.051	0.256	mg/Kg	2.94	3.08	105		80--120
Chromium, Total, ICP-MS	0.2	1.02	mg/Kg	121.9	70.6	58		40--80
Lead, Total, ICP-MS	0.1	0.512	mg/Kg	150	149	99		80--120
Nickel, Total, ICP-MS	0.1	0.512	mg/Kg	42.9	37.3	87		80--120
Zinc, Total, ICP-MS	0.51	2.56	mg/Kg	408	380	93		69--109

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104189 (bs#325 bnallfull) Run ID: R140572

MB:WG104189-1 Matrix: OTHR SOLID Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	
2-Chloronaphthalene	4	8	ug/Kg	<MDL	
2-Chlorophenol	4	8	ug/Kg	<MDL	
2-Methylnaphthalene	2	4	ug/Kg	<MDL	
2-Methylphenol	2	4	ug/Kg	<MDL	
2-Nitrophenol	10	20	ug/Kg	<MDL	
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
4-Methylphenol	4	8	ug/Kg	<MDL	
Acenaphthene	2	4	ug/Kg	<MDL	
Acenaphthylene	2	4	ug/Kg	<MDL	
Aniline	40	80	ug/Kg	<MDL	
Anthracene	2	4	ug/Kg	<MDL	
Benzo(a)anthracene	2	4	ug/Kg	<MDL	
Benzo(a)pyrene	2	4	ug/Kg	<MDL	
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	
Benzoic Acid	10	20	ug/Kg	<MDL	
Benzyl Alcohol	2	4	ug/Kg	<MDL	
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	26.2	B
Caffeine	4	8	ug/Kg	<MDL	
Carbazole	2	4	ug/Kg	<MDL	
Chrysene	2	4	ug/Kg	<MDL	
Coprostanol	40	80	ug/Kg	<MDL	
Di-N-Butyl Phthalate	4	8	ug/Kg	4	B

King County Environmental Laboratory Analytical QC Report

Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL
Dibenzofuran	2	4	ug/Kg	<MDL
Diethyl Phthalate	4	8	ug/Kg	<MDL
Dimethyl Phthalate	4	8	ug/Kg	<MDL
Fluoranthene	2	4	ug/Kg	<MDL
Fluorene	2	4	ug/Kg	<MDL
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL
Hexachloroethane	1	2	ug/Kg	<MDL
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL
Isophorone	10	20	ug/Kg	<MDL
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL
Naphthalene	2	4	ug/Kg	<MDL
Nitrobenzene	4	8	ug/Kg	<MDL
Pentachlorophenol	10	20	ug/Kg	<MDL
Phenanthrene	2	4	ug/Kg	<MDL
Phenol	4	8	ug/Kg	<MDL
Pyrene	2	4	ug/Kg	<MDL

King County Environmental Laboratory Analytical QC Report

SB:WG104189-2 MB:WG104189-1 Matrix: OTHR SOLID Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	47.8	48		13--110
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	57.9	58		10--116
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	57.8	58		32--125
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	58.4	58		18--95
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	55.3	55		21--99
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	55.2	55		33--113
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	41.9	42		27--98
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	33.2	33		24--103
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	12.3	12		10--81
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	65.9	66		35--148
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	63.7	64		46--110
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	40.8	41		25--96
2-Chlorophenol	4	8	ug/Kg	<MDL	100	60.7	61		10--102
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	43.6	44		22--99
2-Methylphenol	2	4	ug/Kg	<MDL	100	33.9	34		16--91
2-Nitrophenol	10	20	ug/Kg	<MDL	100	55.5	56		21--98
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	70.8	71		47--113
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	65.9	66		39--101
4-Methylphenol	4	8	ug/Kg	<MDL	100	28.3	28		10--125
Acenaphthene	2	4	ug/Kg	<MDL	100	56.2	56		29--102
Acenaphthylene	2	4	ug/Kg	<MDL	100	58.5	59		31--101
Aniline	40	80	ug/Kg	<MDL	100	<MDL	0	*	10--102
Anthracene	2	4	ug/Kg	<MDL	100	68.9	69		45--114
Benzo(a)anthracene	2	4	ug/Kg	<MDL	100	89.7	90		69--117
Benzo(a)pyrene	2	4	ug/Kg	<MDL	100	78	78		15--137
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	100	77.7	78		50--121
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	100	78.9	79		46--126
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	100	85.5	85		58--128
Benzoic Acid	10	20	ug/Kg	<MDL	100	63.2	63		10--170
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	53.3	53		10--119
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	97.5	97		15--183
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	47.3	47		19--103
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	53.5	54		18--82
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	56.4	56		10--104
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	26.2	100	93.8	68		10--182
Caffeine	4	8	ug/Kg	<MDL	100	80.6	81		45--159
Carbazole	2	4	ug/Kg	<MDL	100	73.2	73		44--179
Chrysene	2	4	ug/Kg	<MDL	100	73.2	73		69--111
Coprostanol	40	80	ug/Kg	<MDL	1000	492	49		10--159
Di-N-Butyl Phthalate	4	8	ug/Kg	4	100	105	101		17--180
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	95.8	96		10--200
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	100	86.9	87		53--129

King County Environmental Laboratory Analytical QC Report

Dibenzofuran	2	4	ug/Kg	<MDL	100	55.2	55	37--97
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	80.4	80	51--118
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	66.6	67	38--114
Fluoranthene	2	4	ug/Kg	<MDL	100	79.3	79	55--132
Fluorene	2	4	ug/Kg	<MDL	100	61.5	62	39--106
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	66.6	67	40--111
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	44.9	45	10--97
Hexachloroethane	1	2	ug/Kg	<MDL	100	49.9	50	17--92
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	100	87.8	88	51--132
Isophorone	10	20	ug/Kg	<MDL	100	58.3	58	10--131
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	62.8	63	10--146
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	65.7	66	14--101
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	39.9	40	11--148
Naphthalene	2	4	ug/Kg	<MDL	100	49.9	50	17--94
Nitrobenzene	4	8	ug/Kg	<MDL	100	48	48	10--112
Pentachlorophenol	10	20	ug/Kg	<MDL	100	61.3	61	38--124
Phenanthrene	2	4	ug/Kg	<MDL	100	68.3	68	57--104
Phenol	4	8	ug/Kg	<MDL	100	64.6	65	10--107
Pyrene	2	4	ug/Kg	<MDL	100	85.3	85	48--132

King County Environmental Laboratory Analytical QC Report

MSD:WG104189-4 MS:WG104189-3 L48633-1 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	47.3	47		10--115	100	53.4	53		12		35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	49.7	50		10--105	100	55.9	56		11		35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	66.6	67		16--162	100	74.5	74		10		35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	41.2	41		10--103	100	55.4	55		29		35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	43.2	43		10--104	100	55.2	55		24		35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	87.7	88		23--166	100	94.3	94		7		35
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	60.3	60		26--153	100	73.8	74		21		35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	34.6	35		24--142	100	43.6	44		23		35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	14.2	14		10--150	100	30.2	30		73	*	35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	79.7	80		27--166	100	76.3	76		5		35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	85.5	85		10--183	100	93.1	93		9		35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	35.1	35		26--111	100	40.3	40		13		35
2-Chlorophenol	4	8	ug/Kg	<MDL	100	57.3	57		10--112	100	69	69		19		35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	44.3	44		22--112	100	44.6	45		2		35
2-Methylphenol	2	4	ug/Kg	<MDL	100	35.4	35		10--142	100	44.1	44		23		35
2-Nitrophenol	10	20	ug/Kg	<MDL	100	56.2	56		20--107	100	61.3	61		9		35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	84.2	84		30--146	100	90.9	91		8		35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	92.5	93		25--139	100	97.1	97		4		35
4-Methylphenol	4	8	ug/Kg	<MDL	100	29.2	29		10--163	100	36.4	36		22		35
Acenaphthene	2	4	ug/Kg	<MDL	100	60.5	61		25--130	100	67.2	67		9		35
Acenaphthylene	2	4	ug/Kg	<MDL	100	62.2	62		27--132	100	68.2	68		9		35
Aniline	40	80	ug/Kg	<MDL	100	<MDL	0	*	10--67	100	<MDL	0	*			35
Anthracene	2	4	ug/Kg	<MDL	100	76.1	76		10--181	100	81	81		6		35
Benzo(a)anthracene	2	4	ug/Kg	<MDL	100	95.3	95		32--168	100	103	103		8		35
Benzo(a)pyrene	2	4	ug/Kg	<MDL	100	87.6	88		10--200	100	97.6	98		11		35
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	100	86	86		10--199	100	97.1	97		12		35
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	100	76	76		10--173	100	87.6	88		15		35
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	100	93.4	93		10--192	100	109	109		16		35
Benzoic Acid	10	20	ug/Kg	90.8	100	149	58		10--158	100	157	66		13		35
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	46.9	47		10--138	100	54.4	54		14		35
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	116	116		41--145	100	128	128		10		35
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	45.2	45		23--103	100	41.1	41		9		35
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	44.5	45		10--80	100	49.3	49		9		35
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	55.9	56		10--142	100	62.8	63		12		35
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	34.5	100	122	87		10--189	100	141	106		20		35
Caffeine	4	8	ug/Kg	<MDL	100	71.3	71		17--195	100	78.3	78		9		35
Carbazole	2	4	ug/Kg	<MDL	100	66.6	67		16--200	100	73.9	74		10		35
Chrysene	2	4	ug/Kg	<MDL	100	78.6	79		14--184	100	84.3	84		6		35
Coprostanol	40	80	ug/Kg	<MDL	1000	592	59		10--183	1000	654	65		10		35
Di-N-Butyl Phthalate	4	8	ug/Kg	5.5	100	111	106		10--194	100	123	118		11		35
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	127	127		52--151	100	156	156	*	20		35
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	100	83.9	84		10--166	100	95.5	95		12		35

King County Environmental Laboratory Analytical QC Report

Dibenzofuran	2	4	ug/Kg	<MDL	100	68.7	69	21--134	100	75.4	75	8		35
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	109	109	31--150	100	109	109	0		35
Dimethyl Phthalate	4	8	ug/Kg	14.8	100	88.3	73	13--162	100	95.4	81	10		35
Fluoranthene	2	4	ug/Kg	<MDL	100	83	83	12--188	100	84.1	84	1		35
Fluorene	2	4	ug/Kg	<MDL	100	86.4	86	22--147	100	89.1	89	3		35
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	74.7	75	18--151	100	79.9	80	6		35
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	45.7	46	10--97	100	52.2	52	12		35
Hexachloroethane	1	2	ug/Kg	<MDL	100	42.9	43	10--89	100	48.9	49	13		35
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	100	87.2	87	10--177	100	97.5	98	12		35
Isophorone	10	20	ug/Kg	<MDL	100	53.6	54	16--130	100	45.7	46	16		35
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	49.4	49	10--176	100	46.1	46	6		35
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	57.1	57	10--119	100	91	91	46	*	35
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	66	66	10--169	100	71.8	72	9		35
Naphthalene	2	4	ug/Kg	<MDL	100	48.9	49	12--97	100	50.8	51	4		35
Nitrobenzene	4	8	ug/Kg	<MDL	100	47.9	48	10--105	100	52.4	52	8		35
Pentachlorophenol	10	20	ug/Kg	<MDL	100	75.2	75	17--170	100	86.8	87	15		35
Phenanthrene	2	4	ug/Kg	<MDL	100	81.2	81	10--200	100	81.5	82	1		35
Phenol	4	8	ug/Kg	<MDL	100	54.3	54	10--127	100	63.1	63	15		35
Pyrene	2	4	ug/Kg	2	100	115	113	20--174	100	113	111	2		35

King County Environmental Laboratory Analytical QC Report

SRM:WG104189-5 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Anthracene	270	533	ug/Kg	1750	794	45		28--98
Benzo(a)anthracene	270	533	ug/Kg	4660	4670	100		66--124
Benzo(a)pyrene	270	533	ug/Kg	4240	3380	80		60--116
Benzo(b)fluoranthene	270	533	ug/Kg	3820	3300	86		52--190
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	2120	76		15--121
Benzo(k)fluoranthene	270	533	ug/Kg	2270	2380	105		60--146
Chrysene	270	533	ug/Kg	4800	4940	103		77--136
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	500	119		10--200
Fluoranthene	270	533	ug/Kg	8800	7790	89		45--126
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	2160	79		33--121
Naphthalene	270	533	ug/Kg	1630	440	27		10--29
Phenanthrene	270	533	ug/Kg	5200	4480	86		51--106
Pyrene	270	533	ug/Kg	9570	9590	100		36--135

LD:WG104189-6 L48629-8 Matrix: FRSHWTRSED Listtype: ORBNALLFULL Method: SW846 3550B*SW846 8270D Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	<MDL			35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			35
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	<MDL			35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	<MDL			35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	<MDL			35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	<MDL			35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	<MDL			35
2-Chlorophenol	4	8	ug/Kg	<MDL	<MDL			35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	<MDL			35
2-Methylphenol	2	4	ug/Kg	<MDL	<MDL			35
2-Nitrophenol	10	20	ug/Kg	<MDL	<MDL			35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			35
4-Methylphenol	4	8	ug/Kg	<MDL	<MDL			35
Acenaphthene	2	4	ug/Kg	4.61	6.06	27		35
Acenaphthylene	2	4	ug/Kg	<MDL	<MDL			35
Aniline	40	80	ug/Kg	<MDL	<MDL			35
Anthracene	2	4	ug/Kg	3.1	3.4			35
Benzo(a)anthracene	2	4	ug/Kg	6.93	6.74	3		35

King County Environmental Laboratory Analytical QC Report

Benzo(a)pyrene	2	4	ug/Kg	5.23	6.03	14	35
Benzo(b)fluoranthene	2	4	ug/Kg	8.04	7.25	10	35
Benzo(g,h,i)perylene	2	4	ug/Kg	3	3.8		35
Benzo(k)fluoranthene	2	4	ug/Kg	7.63	7.36	4	35
Benzoic Acid	10	20	ug/Kg	121	133	9	35
Benzyl Alcohol	2	4	ug/Kg	<MDL	<MDL		35
Benzyl Butyl Phthalate	4	8	ug/Kg	23.5	23.8	1	35
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	<MDL		35
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	<MDL		35
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	<MDL		35
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	32.2	33.1	3	35
Caffeine	4	8	ug/Kg	<MDL	<MDL		35
Carbazole	2	4	ug/Kg	<MDL	<MDL		35
Chrysene	2	4	ug/Kg	12.5	8.32	40	* 35
Coprostanol	40	80	ug/Kg	<MDL	<MDL		35
Di-N-Butyl Phthalate	4	8	ug/Kg	6.1	5.2		35
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	<MDL		35
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	<MDL		35
Dibenzofuran	2	4	ug/Kg	3.8	4.33	13	35
Diethyl Phthalate	4	8	ug/Kg	<MDL	4.1		35
Dimethyl Phthalate	4	8	ug/Kg	<MDL	<MDL		35
Fluoranthene	2	4	ug/Kg	13.5	15	11	35
Fluorene	2	4	ug/Kg	7.75	8.37	8	35
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL		35
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	<MDL		35
Hexachloroethane	1	2	ug/Kg	<MDL	<MDL		35
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	2.8	3.9		35
Isophorone	10	20	ug/Kg	<MDL	<MDL		35
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	<MDL		35
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	<MDL		35
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	<MDL		35
Naphthalene	2	4	ug/Kg	<MDL	2.2		35
Nitrobenzene	4	8	ug/Kg	<MDL	<MDL		35
Pentachlorophenol	10	20	ug/Kg	<MDL	<MDL		35
Phenanthrene	2	4	ug/Kg	16.5	21.6	27	35
Phenol	4	8	ug/Kg	<MDL	<MDL		35
Pyrene	2	4	ug/Kg	15.7	18.4	16	35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	2,4,6-Tribromo phenol 29--112	2-Fluoro biphenyl 31--101	2-Fluoro phenol 10--112	d14-Ter phenyl 51--130	d4-1,2-Dichloro benzene 24--91	d4-2-Chloro phenol 11--105	d5-Nitro benzene 28--94	d5-Phenol 10--106
L48629-1	104	38	49	102	42	59	53	61
L48629-2	103	44	50	87	48	68	66	64
L48629-3	84	43	58	81	42	67	58	70
L48629-4	83	42	51	91	44	67	66	61
L48629-5	82	39	54	86	45	67	61	65
L48629-6	69	46	63	88	50	66	69	52
L48629-7	71	42	60	90	51	65	77	51
L48629-8	71	38	46	87	40	50	55	38
L48629-9	70	46	60	87	58	69	75	47
L48633-1	53	31	37	90	38	44	51	31
L48633-2	62	57	109	114	50	69	71	57
L48633-3	64	54	64	85	50	66	78	42
L48633-4	61	45	46	91	43	58	61	47
L48633-5	59	52	63	93	46	59	71	40
L48633-6	51	37	44	84	44	52	65	37
L48633-7	49	48	47	85	45	51	65	34
L48633-8	49	51	47	99	42	55	66	39
L48633-9	58	50	58	88	50	57	67	35
WG104189-1	40	38	45	70	50	51	51	44
WG104189-2	62	42	55	78	59	60	47	62
WG104189-3	94	34	45	88	51	54	49	51
WG104189-4	100	37	56	95	57	62	57	59
WG104189-5	80	79	79	112	86	100	98 *	108 *
WG104189-6	106	37	49	89	40	60	54	58

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104190 (bs#325 edc) Run ID: R140543

MB:WG104190-1 Matrix: OTHR SOLID Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	
Bisphenol A	10	20	ug/Kg	<MDL	
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	

SB:WG104190-2 MB:WG104190-1 Matrix: OTHR SOLID Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	200	152	76		25--150
Bisphenol A	10	20	ug/Kg	<MDL	100	38.6	39		25--150
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	68.6	69		25--150

MSD:WG104190-4 MS:WG104190-3 L48633-1 Matrix: FRSHWTRSED Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	17	200	169	76		25--150	200	193	88		15		35
Bisphenol A	10	20	ug/Kg	<MDL	100	38.4	38		25--150	100	38.7	39		3		35
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	95.2	95		25--150	100	128	128		30		35

LD:WG104190-6 L48629-8 Matrix: FRSHWTRSED Listtype: OREDC Method: SW846 3550B*SW846 8270D Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	11			35
Bisphenol A	10	20	ug/Kg	<MDL	<MDL			35
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	<MDL			35

King County Environmental Laboratory Analytical QC Report

Surrogate:	'LPHENOL
(Lab Limits)	**25--150**
L48629-1	115
L48629-2	119
L48629-3	142
L48629-4	155 *
L48629-5	161 *
L48629-6	137
L48629-7	124
L48629-8	95
L48629-9	97
L48633-1	66
L48633-2	134
L48633-3	109
L48633-4	111
L48633-5	103
L48633-6	105
L48633-7	91
L48633-8	82
L48633-9	119
WG104190-1	42
WG104190-2	79
WG104190-3	101
WG104190-4	126
WG104190-6	125

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104595 (EDCS#7 EDC-LVI) Run ID: R138304

MB:WG104595-1 Matrix: OTHR SOLID Listtype: OREDC-LVI Method: TERNS (2002) Project: 421240C
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Estradiol	0.05	0.504	ug/Kg	<MDL	
Estrone	0.03	0.302	ug/Kg	<MDL	
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	

SB:WG104595-2 MB:WG104595-1 Matrix: OTHR SOLID Listtype: OREDC-LVI Method: TERNS (2002) Project: 421240C
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Estradiol	0.05	0.504	ug/Kg	<MDL	2.02	2.1	104		50--150
Estrone	0.03	0.302	ug/Kg	<MDL	2.02	2.41	120		50--150
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	2.02	2	99		50--150

MSD:WG104595-4 MS:WG104595-3 L48633-1 Matrix: FRSHWTRSED Listtype: OREDC-LVI Method: TERNS (2002) Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Estradiol	0.05	0.504	ug/Kg	<MDL	2.02	2.11	105		50--150	2.02	2.14	106		1		35
Estrone	0.03	0.302	ug/Kg	<MDL	2.02	2.34	116		50--150	2.02	2.37	118		2		35
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	2.02	1.99	99		50--150	2.02	2.02	100		1		35

LD:WG104595-5 L48629-1 Matrix: FRSHWTRSED Listtype: OREDC-LVI Method: TERNS (2002) Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Estradiol	0.05	0.504	ug/Kg	<MDL	<MDL			35
Estrone	0.03	0.302	ug/Kg	<MDL	0.038			35
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	<MDL			35

King County Environmental Laboratory Analytical QC Report

Surrogate:	stradiol-d4	Estrone-d4	Estradiol-d4
(Lab Limits)	30--200	30--200	30--200
L48629-1	95	99	101
L48629-2	88	98	94
L48629-3	119	121	125
L48629-4	131	125	133
L48629-5	131	135	139
L48629-6	106	105	121
L48629-7	97	104	103
L48629-8	83	96	92
L48629-9	99	110	110
L48633-1	113	105	117
L48633-2	163	144	131
L48633-3	114	121	145
L48633-4	118	113	125
L48633-5	103	105	115
L48633-6	96	97	92
L48633-7	93	94	96
L48633-8	45	55	48
L48633-9	104	110	111
WG104595-1	74	70	74
WG104595-2	81	75	82
WG104595-3	96	91	104
WG104595-4	101	96	107
WG104595-5	84	90	87

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104212 (pplls#82 pbde) Run ID: R140324

MB:WG104212-1 Matrix: OTHR SOLID Listtype: ORPBDE Method: SW846 3550B*EPA 1614 Project: 421240C
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
DecaBDE-209	0.033	0.0667	ug/Kg	<MDL	
HeptaBDE-183	0.0067	0.0133	ug/Kg	<MDL	
HeptaBDE-190	0.0067	0.0133	ug/Kg	<MDL	
HexaBDE-138	0.0067	0.0133	ug/Kg	<MDL	
HexaBDE-153	0.0067	0.0133	ug/Kg	<MDL	
HexaBDE-154	0.0067	0.0133	ug/Kg	<MDL	
PentaBDE-100	0.0067	0.0133	ug/Kg	<MDL	
PentaBDE-85	0.0067	0.0133	ug/Kg	<MDL	
PentaBDE-99	0.0067	0.0133	ug/Kg	0.007	B
TetraBDE-47	0.0067	0.0133	ug/Kg	0.0089	B
TetraBDE-66	0.0067	0.0133	ug/Kg	<MDL	
TetraBDE-71	0.0067	0.0133	ug/Kg	<MDL	
TriBDE-17	0.0067	0.0133	ug/Kg	<MDL	
TriBDE-28	0.0067	0.0133	ug/Kg	<MDL	

SB:WG104212-2 MB:WG104212-1 Matrix: OTHR SOLID Listtype: ORPBDE Method: SW846 3550B*EPA 1614 Project: 421240C
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
DecaBDE-209	0.067	0.133	ug/Kg	<MDL	2.08	0.759	36	*	50--150
HeptaBDE-183	0.013	0.0267	ug/Kg	<MDL	0.417	0.313	75		50--150
HeptaBDE-190	0.013	0.0267	ug/Kg	<MDL	0.417	0.3	72		50--150
HexaBDE-138	0.013	0.0267	ug/Kg	<MDL	0.417	0.329	79		50--150
HexaBDE-153	0.013	0.0267	ug/Kg	<MDL	0.417	0.313	75		50--150
HexaBDE-154	0.013	0.0267	ug/Kg	<MDL	0.417	0.288	69		50--150
PentaBDE-100	0.013	0.0267	ug/Kg	<MDL	0.417	0.291	70		50--150
PentaBDE-85	0.013	0.0267	ug/Kg	<MDL	0.417	0.319	77		50--150
PentaBDE-99	0.013	0.0267	ug/Kg	0.007	0.417	0.331	78		50--150
TetraBDE-47	0.013	0.0267	ug/Kg	0.0089	0.417	0.355	83		50--150
TetraBDE-66	0.013	0.0267	ug/Kg	<MDL	0.417	0.404	97		50--150
TetraBDE-71	0.013	0.0267	ug/Kg	<MDL	0.417	0.323	78		50--150
TriBDE-17	0.013	0.0267	ug/Kg	<MDL	0.417	0.34	82		50--150
TriBDE-28	0.013	0.0267	ug/Kg	<MDL	0.417	0.319	76		50--150

King County Environmental Laboratory Analytical QC Report

MSD:WG104212-4 MS:WG104212-3 L48633-3 Matrix: FRSHWTRSED Listtype: ORPBDE Method: SW846 3550B*EPA 1614 Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
DecaBDE-209	0.067	0.133	ug/Kg	0.277	2.08	1.19	44	*	50--150	2.08	2.25	95		73	*	35
HeptaBDE-183	0.013	0.0267	ug/Kg	<MDL	0.417	0.303	73		50--150	0.417	0.293	70		4		35
HeptaBDE-190	0.013	0.0267	ug/Kg	<MDL	0.417	0.278	67		50--150	0.417	0.264	63		6		35
HexaBDE-138	0.013	0.0267	ug/Kg	<MDL	0.417	0.333	80		50--150	0.417	0.334	80		0		35
HexaBDE-153	0.013	0.0267	ug/Kg	0.011	0.417	0.332	77		50--150	0.417	0.324	75		3		35
HexaBDE-154	0.013	0.0267	ug/Kg	0.0087	0.417	0.293	68		50--150	0.417	0.292	68		0		35
PentaBDE-100	0.013	0.0267	ug/Kg	0.0091	0.417	0.287	67		50--150	0.417	0.296	69		3		35
PentaBDE-85	0.013	0.0267	ug/Kg	<MDL	0.417	0.315	76		50--150	0.417	0.321	77		1		35
PentaBDE-99	0.013	0.0267	ug/Kg	0.0409	0.417	0.379	81		50--150	0.417	0.37	79		3		35
TetraBDE-47	0.013	0.0267	ug/Kg	0.0636	0.417	0.404	82		50--150	0.417	0.412	84		2		35
TetraBDE-66	0.013	0.0267	ug/Kg	<MDL	0.417	0.397	95		50--150	0.417	0.408	98		3		35
TetraBDE-71	0.013	0.0267	ug/Kg	<MDL	0.417	0.317	76		50--150	0.417	0.322	77		1		35
TriBDE-17	0.013	0.0267	ug/Kg	<MDL	0.417	0.319	77		50--150	0.417	0.311	75		3		35
TriBDE-28	0.013	0.0267	ug/Kg	<MDL	0.417	0.319	77		50--150	0.417	0.324	78		1		35

LCS:WG104212-5 Matrix: OTHR SOLID Listtype: ORPBDE Method: SW846 3550B*EPA 1614 Project: NONE
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
DecaBDE-209	4	8	ug/Kg	2460	5100	207	*	80--120
HeptaBDE-183	0.8	1.6	ug/Kg	42.1	41.4	98		80--120
HexaBDE-138	0.8	1.6	ug/Kg	14.9	13.5	91		80--120
HexaBDE-153	0.8	1.6	ug/Kg	117	101	87		80--120
HexaBDE-154	0.8	1.6	ug/Kg	81.7	74.9	92		80--120
PentaBDE-100	0.8	1.6	ug/Kg	142	121	85		80--120
PentaBDE-85	0.8	1.6	ug/Kg	42.9	51	119		80--120
PentaBDE-99	0.8	1.6	ug/Kg	873	843	97		80--120
TetraBDE-47	0.8	1.6	ug/Kg	487	507	104		80--120
TriBDE-17	0.8	1.6	ug/Kg	11.3	16.4	145	*	80--120
TriBDE-28	0.8	1.6	ug/Kg	45.9	46.9	102		80--120

King County Environmental Laboratory Analytical QC Report

LD:WG104212-6 L48629-8 Matrix: FRSHWTRSED Listtype: ORPBDE Method: SW846 3550B*EPA 1614 Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
DecaBDE-209	0.067	0.133	ug/Kg	0.127	0.269	72	*	35
HeptaBDE-183	0.013	0.0267	ug/Kg	<MDL	<MDL			35
HeptaBDE-190	0.013	0.0267	ug/Kg	<MDL	<MDL			35
HexaBDE-138	0.013	0.0267	ug/Kg	0.012	0.019			35
HexaBDE-153	0.013	0.0267	ug/Kg	0.0579	0.0636	9		35
HexaBDE-154	0.013	0.0267	ug/Kg	0.012	<MDL			35
PentaBDE-100	0.013	0.0267	ug/Kg	0.0099	0.014			35
PentaBDE-85	0.013	0.0267	ug/Kg	<MDL	<MDL			35
PentaBDE-99	0.013	0.0267	ug/Kg	0.034	0.0455	29		35
TetraBDE-47	0.013	0.0267	ug/Kg	0.048	0.0671	33		35
TetraBDE-66	0.013	0.0267	ug/Kg	<MDL	<MDL			35
TetraBDE-71	0.013	0.0267	ug/Kg	<MDL	<MDL			35
TriBDE-17	0.013	0.0267	ug/Kg	<MDL	<MDL			35
TriBDE-28	0.013	0.0267	ug/Kg	<MDL	<MDL			35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	Decachloro biphenyl 12--158
L48629-1	90
L48629-2	82
L48629-3	90
L48629-4	83
L48629-5	87
L48629-6	89
L48629-7	81
L48629-8	86
L48629-9	87
L48633-1	82
L48633-2	95
L48633-3	82
L48633-4	96
L48633-5	90
L48633-6	87
L48633-7	92
L48633-8	94
L48633-9	83
WG104212-1	90
WG104212-2	87
WG104212-3	80
WG104212-4	84
WG104212-5	95
WG104212-6	89

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104211 (pps#422 pcbll) Run ID: R138964

MB:WG104211-1 Matrix: OTHR SOLID Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	
Total Aroclors	0.83	1.67	ug/Kg	<MDL	

SB:WG104211-2 MB:WG104211-1 Matrix: OTHR SOLID Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	17.5	70		39--121
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	15.5	62		53--140

MSD:WG104211-4 MS:WG104211-3 L48633-1 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	15.6	62		32--164	25	15.7	63		2		35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	17.1	68		28--144	25	16.3	65		5		35

SRM:WG104211-5 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Aroclor 1254	2.7	5.33	ug/Kg	112	83.5	75		57--139

King County Environmental Laboratory Analytical QC Report

LD:WG104211-6 L48633-4 Matrix: FRSHWTRSED Listtype: ORPCBLL Method: SW846 3550B*SW846 8082A Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	<MDL			35
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	<MDL			35
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	<MDL			35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	<MDL			35
Total Aroclors	0.83	1.67	ug/Kg	<MDL	<MDL			35

Surrogate: (Lab Limits)	2,4,5,6-Tetrachloro m-xylene 10--118	Decachloro biphenyl 12--158
L48629-1	55	56
L48629-2	61	66
L48629-3	59	63
L48629-4	61	65
L48629-5	61	61
L48629-6	59	55
L48629-7	54	62
L48629-8	50	63
L48629-9	58	62
L48633-1	54	71
L48633-2	64	47
L48633-3	57	64
L48633-4	60	55
L48633-5	62	60
L48633-6	54	61
L48633-7	60	61
L48633-8	69	45
L48633-9	63	54
WG104211-1	50	77
WG104211-2	43	62
WG104211-3	48	72
WG104211-4	50	67
WG104211-5	64	48
WG104211-6	64	67

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104210 (pplls#82 pestll) Run ID: R138205

MB:WG104210-1 Matrix: OTHR SOLID Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	
Aldrin	0.67	1.33	ug/Kg	<MDL	
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	
Beta-BHC	0.33	0.667	ug/Kg	<MDL	
Delta-BHC	0.33	0.667	ug/Kg	<MDL	
Dieldrin	0.67	1.33	ug/Kg	<MDL	
Endosulfan I	0.67	1.33	ug/Kg	<MDL	
Endosulfan II	0.67	1.33	ug/Kg	<MDL	
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	
Endrin	0.67	1.33	ug/Kg	<MDL	
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	
Gamma-Chlordane	0.33	0.667	ug/Kg	<MDL	
Heptachlor	0.33	0.667	ug/Kg	<MDL	
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	
Methoxychlor	3.3	6.67	ug/Kg	<MDL	
Toxaphene	6.7	13.3	ug/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

SB:WG104210-2 MB:WG104210-1 Matrix: OTHR SOLID Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	4.68	70	*	78--121
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	4.7	70	*	75--111
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	4.51	68		57--145
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	3.33	50		28--113
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.5	53		20--99
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.15	62	*	66--102
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.75	56	*	63--108
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	4.62	69		58--139
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	4.11	62		62--104
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	4.69	70	*	72--109
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	4.03	60	*	61--104
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	4.4	66		60--160
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	0.87	13		10--77
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	3.63	54		27--130
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	3.62	54		20--137
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	3.98	60		59--107
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	5.2	78		72--131

MSD:WG104210-4 MS:WG104210-3 L48633-1 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: 421240C
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	4.6	69		41--157	6.67	3.91	59		16		35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	4.81	72		59--125	6.67	3.76	56	*	25		35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	4.54	68		50--144	6.67	3.88	58		16		35
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	3.81	57	*	61--119	6.67	3.28	49	*	15		35
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.92	59		59--111	6.67	3.34	50	*	17		35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.34	65		60--119	6.67	3.61	54	*	18		35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.71	56		54--126	6.67	3.28	49	*	13		35
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	4.77	72		60--139	6.67	4.06	61		17		35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	4.45	67		64--113	6.67	3.71	56	*	18		35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	4.35	65		36--146	6.67	3.53	53		20		35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	3.61	54		46--113	6.67	2.35	35	*	43	*	35
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	4.6	69		62--166	6.67	3.77	57	*	19		35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	<MDL	0	*	10--66	6.67	<MDL	0	*			35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	3.94	59	*	61--135	6.67	3.5	52	*	13		35
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	4.11	62		52--157	6.67	3.63	54		14		35
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	4.29	64		61--118	6.67	3.77	56	*	13		35
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	5.2	78		53--129	6.67	4.1	61		24		35

King County Environmental Laboratory Analytical QC Report

SRM:WG104210-5 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: NONE
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
4,4'-DDT	5.3	10.7	ug/Kg	119	138	116		10--200
Alpha-Chlordane	2.7	5.33	ug/Kg	16.5	15.2	92		48--144

LD:WG104210-6 L48629-2 Matrix: FRSHWTRSED Listtype: ORPESTLL Method: SW846 3550B*SW846 8081B Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	<MDL			35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	<MDL			35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	<MDL			35
Aldrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			35
Dieldrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endrin	0.67	1.33	ug/Kg	<MDL	<MDL			35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	<MDL			35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	<MDL			35
Gamma-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			35
Heptachlor	0.33	0.667	ug/Kg	<MDL	<MDL			35
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	<MDL			35
Methoxychlor	3.3	6.67	ug/Kg	<MDL	<MDL			35
Toxaphene	6.7	13.3	ug/Kg	<MDL	<MDL			35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	2,4,5,6-Tetra chloro m-xylene 10--118	Decachlo ro biphenyl 12--158
L48629-1	33	51
L48629-2	43	58
L48629-3	44	63
L48629-4	43	55
L48629-5	41	61
L48629-6	47	63
L48629-7	46	56
L48629-8	36	51
L48629-9	44	62
L48633-1	39	57
L48633-2	34	52
L48633-3	36	49
L48633-4	43	65
L48633-5	40	52
L48633-6	47	58
L48633-7	37	57
L48633-8	46	49
L48633-9	37	51
WG104210-1	47	69
WG104210-2	40	64
WG104210-3	44	57
WG104210-4	38	57
WG104210-5	51	66
WG104210-6	36	50

King County Environmental Laboratory Analytical QC Report

Workgroup: WG104158 (WTPH-DS#275) Run ID: R140203

MB:WG104158-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX Project: NONE
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	

SB:WG104158-2 MB:WG104158-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	150	146	97		50--150

SB:WG104158-3 MB:WG104158-1 Matrix: OTHR SOLID Listtype: ORWTPH-DX Method: WDOE NWTPH-DX Project: NONE
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	150	143	95		50--150

LD:WG104158-4 L48629-1 Matrix: FRSHWTRSED Listtype: ORWTPH-DX Method: WDOE NWTPH-DX Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	<MDL			35
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	<MDL			35

LD:WG104158-5 L48633-1 Matrix: FRSHWTRSED Listtype: ORWTPH-DX Method: WDOE NWTPH-DX Project: 421240C
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD^	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	37.9	<MDL	200	*	35
Lube Oil Range (>C24)	25	25	mg/Kg	61	<MDL	200	*	35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	2-Fluoro biphenyl 50--150	Penta cosane 50--150
L48629-1	100	125
L48629-2	100	136
L48629-3	101	139
L48629-4	98	131
L48629-5	98	126
L48629-6	105	146
L48629-7	106	133
L48629-8	98	130
L48629-9	100	140
L48633-1	104	130
L48633-2	107	209 *
L48633-3	106	137
L48633-4	101	135
L48633-5	105	146
L48633-6	106	137
L48633-7	105	138
L48633-8	100	130
L48633-9	108	171 *
WG104158-1	100	119
WG104158-2	96	117
WG104158-3	118	120
WG104158-4	98	120
WG104158-5	102	123

KING COUNTY ENVIRONMENTAL LABORATORY
QUALITY ASSURANCE REVIEW

for

2010 Stream Sediment Monitoring Program

Prepared by:

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INTRODUCTION

This quality assurance (QA) narrative is intended to document the QA review conducted on the chemistry analyses performed for the 2010 Stream Sediment Monitoring program. The QA narrative is organized into the five sections listed below.

- General Comments
- Sample Collection
- Conventional Analyses
- Metal Chemistry
- Organic Chemistry

An overview of the approach used for the QA review is detailed in the *General Comments* section. This review is a comparison of the requirements and specifications in the Sampling and Analysis Plan (SAP) and the actual sample collection and analysis that was performed. Additional information specific to each analysis is included in the appropriate analytical section.

This QA review and narrative (specifically defined as QA1) have been conducted in accordance with guidelines established through the Puget Sound Dredged Disposal Analysis (PSDDA) program, Sediment Management Standards (WAC 173-204-610) and the Sediment Sampling and Analysis Appendix (SAPA), WDOE 2008.

GENERAL COMMENTS

Scope of Samples Submitted

This QA review is associated with freshwater sediment samples collected July 26 and 27, 2010 as part of the 2010 Stream Sediment Monitoring program. The Stream Sediment Monitoring Sampling and Analysis Plan (SAP), draft version from June 2008, generally defines the criteria used in this review.

All analyses have been conducted by the King County Environmental Laboratory (KCEL). Sediment analytical data are reported with associated data qualifiers and have undergone QA1 review, as summarized in this narrative report.

Completeness

Completeness has been evaluated for this data submission and QA review by considering the following criteria:

- Comparing reported data to the planned project analyses summarized in Table 1.
- Compliance with storage conditions and holding times.
- Frequency of analysis of the complete set of quality control (QC) samples outlined in Table 2.

Methods

Analytical methods are noted in the applicable analytical sections of this QA review.

Target Lists

The reported target lists have been compared to the target analytes listed in *Development of Freshwater Sediment Quality Values for Use in Washington State, Phase II Report (*Ecology, 2003) and may also be compared to *Table 3 - Puget Sound Marine Sediment Cleanup Screening Levels Chemical Criteria* contained in Chapter 173-204 WAC.

In 2010, no samples were tested for Fecal Coliforms.

Detection Limits

As part of the QA1 review, the detection limits reported for each parameter have been reviewed against the detection limit requirements defined in the SAP. Unfortunately, the 2008 draft SAP was not updated to reflect current organics detection limits available at the time the samples were analyzed. When sample results have been reported as less than the Method Detection Limit (<MDL) and the associated detection limits are higher than those defined in the SAP, the particular samples and parameters have been identified and the circumstances explained. These summaries are included with each analytical section of this QA review.

The KC Laboratory reports include both the reporting detection limit (RDL) and the method detection limit (MDL) for each sample and parameter, where applicable. The RDL is defined as *the minimum concentration of a chemical constituent that can be reliably quantified while t*he MDL is defined as *the minimum concentration of a chemical constituent that can be detected.* For some methods the detection limits reported may vary from sample to sample depending on the amount of sample analyzed and any additional dilutions required.

Storage Conditions and Holding Times

Storage conditions and holding times have been evaluated using guidelines defined in the project SAP. Preparation and analysis holding times for each method are summarized in each analytical section.

Method Blanks

Method blank results have been used to evaluate the possible laboratory contamination of samples. Method blank results have been reviewed for the presence of analytes detected at or greater than the MDL. For analytes where the method blank response was at or above the MDL associated sample results may be qualified with a B, B2 or B3 flag, depending on the concentration in the sample compared to the method blank.

Standard Reference Materials and Lab Control Samples

Standard reference material (SRM) and lab control sample (LCS) recoveries have been used to evaluate possible low or high analytical bias on a batch-specific basis. LCS and SRM analysis is included with selected organic, metals and conventional parameters (see Table 2). Sample results may be qualified if the LCS or SRM recoveries indicate a potential bias in the associated batch of samples.

Matrix Spikes

Matrix spike recoveries have been used to evaluate possible low or high analytical bias on a matrix and batch-specific basis. Matrix spikes are analyzed with metals, organics and selected conventionals parameters (see Table 2). All associated sample results may be qualified if the MS recoveries indicate a potential bias with all samples in the batch but it is more typical that only the sample used as the spike will be qualified.

For Metals only, matrix spike recovery results are used to qualify sample data only when the sample levels in the spiked sample are less than 4 times the spiked concentration. High sample levels relative to the spiked concentration can compromise the measurement of accurate spike recoveries.

Laboratory Replicate Samples

Replicate analysis (laboratory duplicates or triplicates) is used as an indicator of method precision and is used to qualify data on an analyte and batch-specific basis. Not all replicate data are used, however, as an indicator for data qualification. Only sets of replicate results which include at least one result greater than the RDL are considered for data qualification. These guidelines have been used to account for the fact that precision obtained near the detection limit is not representative of precision obtained throughout the entire analytical range. The precision of lab replicates is used to qualify data only when it is clear that the excessive variability has influenced the associated sample results. Duplicate matrix spikes are also used for selected methods where analyte levels are not routinely above the RDL. The precision of duplicate matrix spikes is used to qualify data only when it is clear that the variability may have influenced the sample result.

Surrogates

Surrogates are only analyzed for organic parameters. Surrogate recoveries have been used to evaluate possible low or high analytical bias on a sample-specific basis. Individual sample results are flagged only if unacceptable recoveries indicate the sample results are biased.

Data Qualifiers

The data qualification guidelines described above has been summarized in Table 3. This table conforms to the guidelines in the current SAPA (2008).

Units and Significant Figures

Units and the reporting basis vary, depending on the parameter and are explained in the analytical sections below. Data generally have been reported to three significant figures if above the RDL and two significant figures if equal to or below the RDL.

SAMPLE COLLECTION

This section describes sampling activities associated with the 18 freshwater sediment samples collected July 26 and 27, 2010. Sampling activities were conducted following general guidance suggested in the Puget Sound Protocols (PSEP, 1996 and 1998), and in the SAP.

Sampling Locations and Station Positioning

Sampling locations (stations) were selected and the prescribed coordinates determined prior to field activities. Stations were selected in order to characterize and evaluate the potential effect(s) of point and non-point sources on freshwater sediment quality in selected WRIA 8 and WRIA 9 stream basins. A number of these stations are part of King County's long-term ongoing monitoring program; other stations were newly created in 2010. The prescribed coordinates for these stations are presented in the following table. All station coordinates are recorded in state plane coordinate system North American Datum 1983 (NAD83).

Lab ID #	Station Name	Station Description	Prescribed Northing (y-plan)	Prescribed Easting (x-plan)
L51247-1	0478	Little Bear Cr.- mouth at bike trail	278818	1312537
L51247-2	A434	Thornton Creek mouth- last footbridge in park	256883	1285033
L51247-3	00631	Issaquah Creek mouth- last footbridge in park	206430	1336885
L51247-4	0432	McAleer Creek, 16750 Shore Drive Sheridan Beach	277057	1284888
L51247-5	0474	North Creek, Under bike trail bridge	278813	1307015
L51247-6	X322	Newaukum Creek, near mouth off 358th SE	105523	1334258
L51247-7	A320	Big Soos Creek, USGS gauge station 12112600, 0.25 mile upstream of hatchery	116821	1309972
L51247-8	0317	Springbrook Creek, bridge at north end of Longacres	173079	1294315
L51247-9	A315	Hill (Mill) Creek, bridge at 68th and S. 261st	137218	1289725
L51247-10	0484	Bear-Evans Creek, upstream of first railroad/trial bridge	246843	1325858
L51298-1	0320	NEWAUKUM Creek//USGS gauging station on N left bank downstream from bridge on 219TH SE	115400	1309035
L51298-2	AA320	BIG SOOS Creek, downstream of Jenkins, East of 154TH AVE SE at SE 296TH ST	125229	1317684
L51298-3	GG320	BIG SOOS Creek, downstream of Kent-Black Diamond Rd.	128035	1317645
L51298-4	Q320	BIG SOOS Creek, at 272nd SE near fire station	133287	1319226
L51298-5	HH320	BIG SOOS Creek at trail bridge, downstream of 256th St.	137405	1315790
L51298-6	P320	BIG SOOS Creek, 256th	140841	1316205
L51298-7	II320	BIG SOOS Creek at trail access 148th/240th	143630	1315845
L51298-8	RR320	BIG SOOS Creek near trail crossing 224th SE	149220	1312470
L51298-9	SS320	BIG SOOS Creek – Gary Grant Park at 208th	154955	1312305
L51298-10	L320	BIG SOOS Creek at Grant Park	155792	1311576

Sediment grab samples were collected by wading into the stream. Core samples were collected within the width and reach of each station such that representative depositional material was obtained. This is consistent with the specifications in the SAP.

Sample Description Table

Lab Sample #	Locator	Sample Collection	Sediment Depth (from surface, cm)	Sample Usage
L51247-1	0478	Surface Grabs	5	Chemistry
L51247-2	A434	Surface Grabs	10	Chemistry
L51247-3	00631	Surface Grabs	10	Chemistry
L51247-4	0432	Surface Grabs	5	Chemistry
L51247-5	0474	Surface Grabs	5	Chemistry
L51247-6	X322	Surface Grabs	5	Chemistry
L51247-7	A320	Surface Grabs	5	Chemistry
L51247-8	0317	Surface Grabs	5	Chemistry
L51247-9	A315	Surface Grabs	5	Chemistry
L51247-10	0484	Surface Grabs	5	Chemistry
L51298-1	0320	Surface Grabs	5	Chemistry
L51298-2	AA320	Surface Grabs	5	Chemistry
L51298-3	GG320	Surface Grabs	5	Chemistry
L51298-4	Q320	Surface Grabs	10	Chemistry
L51298-5	HH320	Surface Grabs	10	Chemistry
L51298-6	P320	Surface Grabs	10	Chemistry
L51298-7	II320	Surface Grabs	10	Chemistry
L51298-8	RR320	Surface Grabs	5	Chemistry
L51298-9	SS320	Surface Grabs	5	Chemistry
L51298-10	L320	Surface Grabs	5	Chemistry

Sample Collection

Sediment was collected at each station using precleaned PVC core tubes or stainless steel spoons. Cored samples were collected from shallow water (<3 ft) by pushing the core tubes into the sediment to a depth of 5 cm. A stainless steel spatula or gloved hand was inserted under the tube mouth to trap the sediment inside as the tube was removed from the stream. Tubes may have been slightly angled to allow drainage of excess water, but fines were not allowed to escape. Sediment in the tube was then transferred to a clean, stainless steel compositing container. Several separate cores may have been collected in order to acquire sufficient sample volume to perform all chemistry analyses. A spoon was used at a number of locations with very thin sediment layers or if the core tubes would not easily penetrate to 5 cm. Sediment was scooped up as efficiently as possible with the spoons and transferred to a stainless steel bucket for compositing.

Sample Handling

For cored samples, the entire contents of all core tubes collected at a given site were emptied directly into a stainless steel bucket. If excess water was present, it was decanted once the fines had been allowed to settle. A stainless steel spoon or spatula was then used to homogenize the sample by stirring. Rocks or other debris one half-inch or larger in diameter were removed and discarded. For spooned samples, the contents of as many spoons of material as needed were emptied directly into a stainless steel bowl. Excess water if present was decanted once the fines had been allowed to settle. The spoon was then used to homogenize the sample by stirring. Any rocks or other debris one half-inch or larger in diameter were removed and discarded. For AVS, an undisturbed portion of sediment was placed in a sample jar. Aliquots of the homogenized sediment were subsampled into individual, pre-labeled containers for chemistry testing except as noted above. Chemical preservative, if needed, was added. Sample containers were supplied by the King County Environmental Laboratory and were pre-cleaned according to analytical specifications.

Decontamination

Dedicated sets of core tubes, spoons and other homogenizing/subsampling equipment were dedicated to each station, precluding the need for decontamination in the field.

Sample Storage and Preservation

Samples were stored in ice-filled coolers from the time of collection until delivery to the King County Environmental Laboratory. Samples were delivered under chain-of-custody and maintained as such throughout the analytical process. Samples were stored frozen (-18°C) by the laboratory until analysis with the exception of samples for particle size distribution (PSD) analysis and acid volatile sulfide. Sample aliquots for these analyses were stored refrigerated at approximately 4°C. A more complete description of sample handling and storage can be found in each analytical chemistry section of this narrative.

Copies of chain-of-custody forms and field notes are included as an appendix to this QA review narrative.

CONVENTIONAL ANALYSES

Completeness

Conventional data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Subcontracted Analyses

All analyses were performed at the King County Environmental Laboratory.

Methods

Acid volatile sulfide analyses were performed in accordance with EPA *Methods for Chemical Analysis of Water and Wastes*, 1991.
Ammonia analysis was performed using the fluorescence method (KEROUEL & AMINOT 1997) following a KCl extraction (Plumb, 1981).
pH analyses were performed in accordance with SW846 9045C.
PSD analysis was performed in accordance with ASTM D422.
TOC analysis was performed in accordance with SM5310-B and EPA 9060.
Ortho-phosphate phosphorus analyses were performed in accordance with SM4500-P-F following an Olsen extraction.
Total solids analyses were performed in accordance with SM2540-G.

Detection Limits

The method detection limits (MDLs) reported for conventionals parameters are within the requirements defined in the SAP with the following exceptions.

For ammonia, ortho-phosphate phosphorus and TOC, reported MDLs and RDLs were higher than SAP requirements for most samples. All samples that had higher detection limits had reportable levels of these parameters thus the project goals were not compromised.

For PSD analysis, several samples have MDLs above the SAP values for Clay but no detectable levels. It is not expected that this has compromised the project goals since the other three PSD parameters (sand, gravel and silt) had reportable levels.

Reporting Requirements (significant figures, units, basis and qualifiers)

For analyses performed at the KC Laboratory, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied. This may not apply to subcontracted data.

In the attached Comprehensive Report, conventionals parameters are reported in mg/Kg, dry weight basis, for TOC, ammonia, ortho-phosphate phosphorus and AVS. Particle Size Distribution (PSD) and Total Solids are reported in percent, wet weight basis. For all parameters, the MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. Any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times

Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for conventional analyses are listed in the table below.

Parameter	Lab ID#	Collect Date	Preparation Date	Analysis Date	Holding Time*	Holding Time**
Ammonia	All	July 26-27, 2010	30-Jul-10	13-Aug-10	6 Months at -18°C	14 days at -18°C
Particle Size Distribution	All	July 26-27, 2010	7-Sep thru 7-Oct-10	16 Sep thru 13-Oct-10	6 Months at 4°C	NA
Total Organic Carbon (TOC)	L51247-1 to 10, L51298-1 to 8, 10	July 26-27, 2010	9-Aug-10	15-Sep thru, 16-Sep 10	6 Months at -18°C	6 Months at -18°C
	L51298-9	July 26, 2010	15-Sep-10	16-Sep-10	6 Months at -18°C	6 Months at -18°C
Orthophosphate Phosphorous	All	July 26-27, 2010	11-Oct-10	12-Oct-10	6 Months at -18°C	14 days at -18°C
Total Solids	All	July 26-27, 2010	16-Aug-10	17-Aug-10	6 Months at -18°C	NA
pH	L51298-1 thru -10 and L51247-6, -7	July 26, 2010	27-Jul-10	27-Jul-10	1 day at 4°C	NA
	L51298-1 thru -5, -8, -9, -10	July 27, 2010	28-Jul-10	28-Jul-10		
Acid Volatile Sulfide (AVS)	L51298-1 thru -8	July 26, 2010	3-Aug-10	3-Aug-10	14 days at 4°C	7 days at 4°C
	L51247-7, L51298-9, 10	July 26, 2010	4-Aug-10	4-Aug-10		

* = Holding time from collection to preparation.
** = Holding time from preparation to analysis.

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks

Method blanks were analyzed in connection with ammonia nitrogen, orthophosphate phosphorus, total solids, total organic carbon and acid volatile sulfide analyses. All method blank results were less than the MDL.

Standard Reference Material and/or Laboratory Control Sample (LCS)

An SRM was analyzed in connection with TOC and LCS samples were analyzed for Ammonia, nitrogen and Orthophosphate Phosphorous the frequency noted in Table 2. All percent recoveries were within the acceptance limits.

Matrix Spikes

Matrix spikes (MS) were analyzed in conjunction with ammonia nitrogen, orthophosphate phosphorus, TOC and AVS at the frequency noted in Table 2. All matrix spike percent recoveries were within the acceptance limits listed in the SAP, except for the following:
The AVS matrix spike recovery was outside the control limit of 65 – 135% for spiked sample L51298-3, with a measured recovery of 10%. The spike blank recovery associated with this matrix spike was within the control limit of 80 – 120% recovery. AVS matrix spike recoveries for freshwater sediments are routinely below the lower acceptance limit while spike blank recoveries are acceptable; therefore, the low MS recovery is assumed to be due to matrix interference. All sample results for AVS have been qualified with a JG flag to indicate that a low bias likely exists. The extent of the bias is uncertain.

Laboratory Replicate Samples

A set of laboratory triplicates was analyzed for each of the conventional parameters at the frequency noted in Table 2. The percent relative standard deviation (%RSD) for each triplicate analyzed using samples from this project was less than or equal to the 20% acceptance limit for all parameters.

Additional QA Issues

None.

METALS CHEMISTRY

Completeness

Metals data are reported for all samples listed in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Methods

SEM extracts were prepared by the Conventionals unit of the KCEL using the EPA method for AVS (1991). These extracts were analyzed by EPA methods 245.1 rev 3 (CVAA Mercury) and 200.7 (ICP metals). Total recoverable metals were analyzed in accordance with EPA method 6020A (ICPMS metals) and EPA method 7471B (CVAA Mercury).

Target List

The reported target list includes the following for total recoverable metals: silver, arsenic, cadmium, chromium, copper, nickel, lead, phosphorus, zinc and mercury. The reported target list for SEM includes: silver, arsenic, cadmium, chromium, copper, nickel, lead, zinc and mercury.

Detection Limits

The method detection limits (MDLs) reported for Metals parameters are within the requirements defined in the draft SAP or detectable levels were reported for all samples.

Reporting Requirements (significant figures, units, basis and qualifiers)

For analyses performed at the KCEL, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied.

In the Comprehensive Report attached, Metals parameters are reported in mg/Kg, dry weight basis, for all elements. The MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. For any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times

Sample storage conditions and holding times have been evaluated using guidelines established during the SAP. The dates and holding time criteria for the actual storage conditions used for metals analyses are listed in the tables below.

Total Metals

Parameter	Lab ID#	Date Collected	Date Digested	Date Analyzed	Sample Holding Time	Digestate/Extract Holding Time
Total metals by ICPMS [a]	All	26,27-Jul-10	28-Sep-10	29-Sep-10	2 years at -18°C	6 months at 20°C
Total Hg by CVAA	All	26,27-Jul-10	16-Aug-10	17-Aug-10	28 days at -18°C	NA

[a] Total Metals by ICPMS include Ag, As, Cd, Cr, Cu, Ni, P, Pb, Zn

Simultaneously Extractable Metals (SEM)

Parameter	Lab ID#	Date Collected	Date AVS/SEM Extracted	Date Analyzed	Sample Holding Time	Digestate/Extract Holding Time
SEM by ICP[a]	L51298-1 thru -8	26-Jul-10	3-Aug-10	10-Aug-10	14 days at 4°C	14 days at 20°C
	L51247-7, L51298-9, 10	26-Jul-10	4-Aug-10			
SEM Hg by CVAA	L51298-1 thru -8	26-Jul-10	3-Aug-10	10-Aug-10	14 days at 4°C	14 days at 20°C
	L51247-7, L51298-9, 10	26-Jul-10	4-Aug-10			

[a] SEM by ICP include Ag, As, Cd, Cr, Cu, Ni, Pb, Zn

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks
All method blanks were less than the MDL except for Total Lead and Total Zinc for ICPMS. The measured concentrations in the samples were higher than 10 times the amounts detected in the method blank so no significant bias is expected.

Laboratory Control Samples
For total metals, multiple LCS samples were run in order to cover as many reported elements as possible (no LCS is available for phosphorus). Two LCS' were analyzed in association with total recoverable metals included in this data submission. All LCS recoveries were within the defined QC limits for total metals analyses.

No sediment LCS or Standard Reference Material (SRM) is available for the SEM procedure. Spike blanks were run to evaluate the performance of the ICP and CVAA analyses of the extracts. All spike blank recoveries were within acceptance limits.

Matrix Spikes
Matrix spike percent recoveries were within the 75% - 125% QC limits for all total metals and SEM analyses. Note: several of the total metals had background levels higher than 4 times the spike level so no recoveries were calculated.

Matrix Spike Duplicate Samples
Matrix spike duplicate (MSD) samples were analyzed for total mercury only. All matrix spike duplicate (MSD) recoveries were within the 75% - 125% QC limit for total mercury analyses.
The relative percent differences (RPDs) for the MSD results were less than or equal to the QC limit of 20%.

Laboratory Replicate Samples
The relative percent differences (RPDs) for laboratory duplicate (LD) results for all total metals and SEM were less than or equal to the QC limit of 20%.

ORGANIC CHEMISTRY

Completeness

Organics data are reported for all samples and parameters summarized in Table 1. These samples were analyzed in association with the complete set of QC samples outlined in Table 2.

Methods

BNAs and selected EDCs (bis(2-ethylhexyl)adipate, bisphenol A, total 4-nonylphenol) were extracted and analyzed in accordance with EPA methods 3550B and 8270D. The hormonal ECDs were analyzed by the Ternes Method (2002). Polybrominated Diphenyl Ethers (PBDE) were analyzed in accordance with EPA Method 1614 modified with GC/ICPMS detection. PCB and chlorinated pesticides analysis was performed in accordance with EPA methods 8082A and 8081B. WTPH-Dx analysis was conducted according to Ecology method NWTPH-DX.

Target List

The reported BNA target list includes all compounds specified in *Table 1 - Marine Sediment Quality Standards Chemical Criteria* and *Table 3 - Puget Sound Marine Sediment Cleanup Screening Levels Chemical Criteria* contained in Chapter 173-204 WAC with the exception of benzo(j)fluoranthene. The KC Laboratory has verified that analytical conditions are sufficient to calculate a total benzofluoranthene result using the reported *b* and *k* isomers.

The reported EDC target lists includes bis(2-ethylhexyl)adipate, bisphenol A, total 4-nonylphenol, estrone, estradiol and ethynyl estradiol.

Gamma-Chlordane has been renamed as Trans-Chlordane.

Reported PCB data include Aroclors 1016, 1221, 1232, 1242, 1248, 1254 and 1260.

Detection Limits, Units and Significant Figures

The detection limits (MDLs) for Organics parameters met those listed in the draft SAP (2008).

The original SAP (2004) defines TOC-normalized MDL requirements for Non-ionizable Organic parameters, based on a nominal dry-weight TOC concentration of 5,000 mg/Kg, or 0.5%. All samples, except L51247-7 and L51298-2, had dry-weight TOC values above 5,000 mg/Kg and thus could be compared to the listed TOC-normalized MDLs. All MDLs for samples with dry-weight TOC values above 5000 mg/Kg for the Non-ionizable Organic parameters were below the associated SMS criteria. This allows comparison of sample results to SMS levels without the problem of detection limits higher than the SMS levels.

Reporting Requirements (significant figures, units, basis and qualifiers)

For analyses performed at the KC Laboratory, data are reported in accordance with laboratory policy at the time the data were generated. Data are reported to three significant figures for results greater than the RDL and two significant figures for results equal to or less than the RDL. For results reported with less than two or three significant figures, significant zeroes are implied.

In the Comprehensive Report attached, Organics parameters are reported on a dry weight basis. For all parameters, the MDL and RDL values for each individual sample are reported in the same units and basis as the sample result. Any result measured at less than the MDL or less than the RDL, a <MDL or <RDL qualifier is added, respectively. Other qualifiers added are based on QC failures and are individually explained in this narrative.

Storage Conditions and Holding Times

Sample storage conditions and holding times have been evaluated using guidelines established in the SAP. The dates and holding time criteria for the actual storage conditions used for organics analyses are listed in the table below.

Parameter	Lab ID#	Date Collected	Date Extracted	Date Analyzed	Sample Holding Time	Extract Holding Time
BNAs	All	26,27-Jul-10	23-Sep-2010	15 thru 21-Oct-2010	1 years at -18°C	40 days at 4°C
Hormonal EDCs	All	26,27-Jul-10	29-Sep-2010	18,19-Oct-2010	1 years at -18°C	40 days at 4°C
PBDEs	All	26,27-Jul-10	28-Jul-2010	30-Aug-2010	1 years at -18°C	40 days at 4°C
Pesticides	All	26,27-Jul-10	28-Jul-2010	24, 25-Aug-2010	1 years at -18°C	40 days at 4°C
PCBs	All	26,27-Jul-10	28-Jul-2010	3, 4-Sep-2010	1 years at -18°C	40 days at 4°C
WTPH-Dx	All	26,27-Jul-10	30-Jul-2010	24,25-Aug-2010	14 days at 4°C	40 days at 4°C

Sample storage conditions and holding times were met for all samples in this data submission.

Method Blanks

Method blanks were analyzed for all Organics parameters and all method blank results were less than the MDL, except as noted below:

1. BNAs
   The method blank analyzed with BNAs had results below the MDL except for the following:

a) Benzoic Acid had a measured result of 28.9 ug/Kg. All sample results were less than 10 times that amount and were qualified with a B or B3 flag. All flagged data may be biased high.

b) Bis(2-ethylhexyl) Phthalate had a measured result of 4.6 ug/Kg. All samples except L51247-1, -2, -4, -8 and -10 had results less than 10 times that amount and were qualified with a B or B2 flag. All flagged data may be biased high. Samples L51247-1, -2, -4, -8 and -10 had results greater than 10 so should not be significantly biased by the contamination detected in the method blank.

c) Di-N-Butyl Phthalate had a measured result of 11.2 ug/Kg. All samples had reported results less than 5 times that amount. All samples except L51247-4 and -5 are qualified with a B flag and the results may be biased high. Samples L51247-4 and -5 were <MDL so the reported results were not biased by the contamination detected in the method blank.

2. PBDEs
   The method blank analyzed with the PBDEs had results below the MDL except for the following:

a) PentaBDE-99 had a measured result of 0.013 ug/Kg. All samples except L51247-1, -2, -4, -8 and L51298-3 had results less than 10 times that amount and were qualified with a B or B3 flag. All flagged data may be biased high. Samples L51247-1, -2, -4, -8 and L51298-3 had results greater than 10 so should not be significantly biased by the contamination detected in the method blank.

b) TetraBDE-47 had a measured result of 0.0198 ug/Kg. All samples except L51247-2, -4, -8 and L51298-3 had results less than 10 times that amount and were qualified with a B or B3 flag. All flagged data may be biased high. Samples L51247-2, -4, -8 and L51298-3 had results greater than 10 so should not be significantly biased by the contamination detected in the method blank.

3. Hormonal EDCs

The method blank analyzed with the Hormonal EDCs had results below the MDL except for Estrone, which had a measured result of 0.077 ug/Kg. All sample results for Estrone, except L51247-2, are qualified with a B flag and the results may be biased high. Sample L51247-2 was <MDL so the reported result was not biased by the contamination detected in the method blank.

Surrogate Recoveries

Surrogate recovery acceptance limits for sediment samples have been developed based on historical lab performance using the current analytical methods. The exception to this is Method NWTPH-Dx where method-defined surrogate acceptance limits are applied.

1. BNAs

For BNA sample data, surrogate recoveries may be evaluated separately for the acid and base/neutral fractions. Within each fraction, 2 or more surrogates must be outside the acceptance limits in order to qualify the associated sample data. No BNA sample had more than 1 surrogate outside the acceptance limits for each fraction.

2. PCBs

Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

3. Chlorinated Pesticides

Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

4. WTPH-Dx

All surrogate recoveries were within the method-specific acceptance limits for 2-fluorobiphenyl for all samples in this data submission. Recovery of pentacosane from Samples L51247-2 exceeded the upper control limit. The associated WTPH-Dx sample results were not qualified since the high recovery is likely due to interference from background pentacosane or a similar coeluting compound. This type of interference does not necessarily indicate a positive bias to the WTPH-Dx results.

5. EDC

Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission except for sample L51247-2. The recovery for D4-4-Nonyl Phenol was above the 150% upper limit at 205%. The results for the associated sample were <MDL so it is unlikely the data is biased.

6. PBDEs

Sample data may be qualified when individual surrogate recoveries are outside lab-specific acceptance limits. All surrogate recoveries were within the lab-specific acceptance limits for all samples in this data submission.

Standard Reference Material (SRM) and/or Laboratory Control Sample (LCS)

SRMs are available only for selected parameters for the BNAs, Chlorinated Pesticides and PCBs. Acceptance limits for the certified parameters reported in this data set have been developed using historical lab data. SRM recoveries outside these lab-defined limits indicate the method has not performed as expected and the associated sample data may be qualified.
An LCS is available for 11 of the individual PBDE parameters reported. Acceptance limits are 80% to 120% for each.

1. BNAs

The sediment SRM analyzed in association with the reported BNA results is 1944, certified by the National Institute of Standards and Technology (NIST). The certified organics parameters in SRM 1944 are only a partial list of all the BNA compounds reported in this analysis. All measured recoveries for this SRM were within acceptance limits, except for Benzo(a)pyrene. The measured recovery for Benzo(a)pyrene was 59% which is just below the lower limit of 60%.

Since the SB, MS and MSD recoveries were all acceptable, along with all calibration QC for Benzo(a)pyrene, it is not expected the slightly low recovery indicates a bias in the sample results.

2. Chlorinated Pesticides
The sediment SRM analyzed in association with the reported Chlorinated Pesticides results is 1944, certified by the NIST. SRM 1944 contains certified levels of 4,4'-DDT and alpha-Chlordane. All measured recoveries for this SRM were within acceptance limits.

3. PCBs
The sediment SRM analyzed in association with the reported PCB results is HS2, certified by the National Research Council of Canada. SRM HS2 contains Aroclor 1254. The measured recovery for this SRM was within acceptance limits.

4. PBDEs
The LCS analyzed with the PBDE samples has certified values for 11 of the 14 parameters analyzed by this method. The recoveries for DecaBDE-209, HexaBDE-138, PentaBDE-99, TetraBDE-47, TriBDE-17, TriBDE-28, were above the 80 to 120% acceptance limits. Shortly after this sample set was analyzed, performance-based acceptance limits were created and are shown on the QC report. All recovery values are within the performance-based limits except DecaBDE-209, which had a recovery of 302%. Since the recovery for DecaBDE-209 was acceptable in the MS/MSD samples, no corrective action was taken.

Matrix Spikes and Spike Blanks
Matrix Spikes (MS) and/or Spike Blanks (SB) have been analyzed for BNAs, EDCs, PBDEs, PCBs, WTPH-Dx and Chlorinated Pesticides. All MS, MSD and SB recoveries were within acceptance limits except for the following:

1. BNAs
- The recovery for Aniline in the MS was 0% compared to the lower acceptance limit of 10%. The Aniline result for the background sample was qualified with a JG flag to indicate a possible low bias.
- The recovery for Benzoic Acid in the MS and SB were 2% and 9%, respectively, compared to the lower acceptance limit of 10%. All Benzoic Acid results for all samples in this set were qualified with a J flag to indicate the results should be used as estimated values.

Laboratory Replicate Samples
A laboratory duplicate sample(s) was analyzed for each Organics parameter. The relative percent differences (RPDs) for laboratory duplicates are compared to the acceptance limits when at least one value is at or above the RDL. All RPD values that met this were less than or equal to the acceptance limit of 35%, except for the following:

1. BNAs
The RPD value for Benzoic Acid and Phenol for Sample L51298-10 were outside the 35% limit at 102% and 200%, respectively. A J flag has been applied to both parameters for Sample L51298-10 to indicate the reported value should be treated as an estimate.

2. PBDEs
The RPD value for HexaBDE-138 for Sample L51298-10 was outside the 35% limit at 41%. A J flag has been applied to HexaBDE-138 for Sample L51298-10 to indicate the reported value should be treated as an estimate.

3. WTPH-Dx
The RPD values for the Lube Oil Range results for Sample L51298-1 were both outside the 35% limit at 200%. Since the Lab Duplicate for Lube Oil Range was just below the MDL value and the sample just above, the actual precision would be considered acceptable. The sample result has therefore not been qualified.

Additional Data Quality Issues

1. BNAs
   The measured concentration for Bis(2-EthyHexyl) phthalate was above the instrument calibration range for Sample L51247-8. The analysis could not be repeated before the holding time expired. The result has been qualified with an E flag and should be treated as an estimated value.
2. EDCs
   The daily calibration check for Bisphenol A and Bis(2-EthylHexyl) adipate were below the method acceptance limits. Samples L51298-9 and -10 were the only samples effected and results for those 2 samples for Bisphenol A and Bis(2-EthylHexyl) adipate have been qualified with a JG flag to indicate a possible low bias.

TABLE 1 SEDIMENT SAMPLE INVENTORY

Sample	Locator	AVS	PSD	Nutrients[1]	Solids,[2] pH	TOC	Total Metals[3]	SEM[4]	BNAs[5]	EDCs[6]	Pest/ PCBs/PBDEs	WTPH-Dx
L51247-1	0478		X	X	X	X	X		X	X	X	X
L51247-2	A434		X	X	X	X	X		X	X	X	X
L51247-3	00631		X	X	X	X	X		X	X	X	X
L51247-4	0432		X	X	X	X	X		X	X	X	X
L51247-5	0474		X	X	X	X	X		X	X	X	X
L51247-6	X322		X	X	X	X	X		X	X	X	X
L51247-7	A320	X	X	X	X	X	X	X	X	X	X	X
L51247-8	0317		X	X	X	X	X		X	X	X	X
L51247-9	A315		X	X	X	X	X		X	X	X	X
L51247-10	0484		X	X	X	X	X		X	X	X	X
L51298-1	0320	X	X	X	X	X	X	X	X	X	X	X
L51298-2	AA320	X	X	X	X	X	X	X	X	X	X	X
L51298-3	GG320	X	X	X	X	X	X	X	X	X	X	X
L51298-4	Q320	X	X	X	X	X	X	X	X	X	X	X
L51298-5	HH320	X	X	X	X	X	X	X	X	X	X	X
L51298-6	P320	X	X	X	X	X	X	X	X	X	X	X
L51298-7	II320	X	X	X	X	X	X	X	X	X	X	X
L51298-8	RR320	X	X	X	X	X	X	X	X	X	X	X
L51298-9	SS320	X	X	X	X	X	X	X	X	X	X	X
L51298-10	L320	X	X	X	X	X	X	X	X	X	X	X

1 Nutrients = Ammonia nitrogen, *o*-Phosphate, Total phosphorus (analyzed and reported with Metals).
2 Solids = Total Solids.
3 Total Metals = Hg, Ag, As, Cd, Cr, Cu, Pb, Ni, P and Zn.
4 SEM = Ag, As, Cd, Cr, Cu, Hg, Ni, Pb and Zn.
5 BNAs = low-level, including chlorobenzenes.
6 EDCs = bis(2-ethylhexyl)adipate, bisphenol A, total 4-nonylphenol, estrone, estradiol and ethynyl estradiol

TABLE 2
QC SAMPLE FREQUENCY FOR SEDIMENT MICROBIAL, CHEMICAL AND PHYSICAL PARAMETERS

Parameter	Method Blank	Duplicate	Triplicate	Matrix Spike	SRM / LCS	Surrogates
Ammonia Nitrogen, *o*-Phosphate	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	No	No
pH	No	See Triplicate	5% minimum, 1 per QC batch	No	No	No
PSD	No	See Triplicate	5% minimum, 1 per QC batch	No	No	No
Total Solids	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	No	No	No
TOC	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	1 per QC batch	No
AVS	1 per QC batch	See Triplicate	5% minimum, 1 per QC batch	5% minimum, 1 per QC batch	No	No
Metals, SEM Metals	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 or more LCS per QC batch (total metals only)	No
BNAs / EDCs	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 per QC batch (BNAs only)	Yes
PCBs/Chlorinated Pesticides	1 per QC batch	5% minimum, 1 per QC batch	No	5% minimum, 1 per QC batch	1 per QC batch	Yes
WTPH-Dx	1 per QC batch	5% minimum, 1 per QC batch	No	No	No	Yes

TABLE 3 - SUMMARY OF DATA QUALIFIERS

Qualifier	Definition
<MDL	Applied when a target analyte is not detected or detected at a concentration less than the associated method detection limit (MDL). The MDL is the lowest concentration at which a sample result will be reported.
<RDL	Applied when a target analyte is detected at a concentration greater than or equal to the associated MDL but less than the associated reporting detection limit (RDL). RDL is defined as the lowest concentration at which an analyte can reliably be quantified.
RDL	Applied when a target analyte is detected at a concentration that, in the raw data is equal to the RDL.
TA	Applied to a sample result when additional narrative information is available in the text field. The additional information may help to qualify the sample result but is not necessarily covered by any other qualifier.
B	**B (including B2 and B3)** are applied when the parameter was detected at a concentration at or above the MDL in the associated blank(s) and has met the appropriate rule or condition, as defined by the method or regulatory program. Use: Application of the "B" flags depends on the ratio of the sample to blank result and the particular parameter according to these rules: - Add a "B" flag to all parameters if the associated blank is ≥ the MDL and the sample result is ≥ MDL but ≤ 5 times the blank. - Add a "B2" flag to common organic lab contaminants (Acetone, 2-Butanone, Methylene Chloride, Bis(2-ethylhexyl) Phthalate, Butyl Benzyl Phthalate and Di-n-butyl Phthalate) if the method blank is ≥ the MDL and the sample result is > 5 and ≤ 10 times the blank. - Add a "B3" flag to all other parameters if the associated blank is ≥ the MDL and the sample result is > 5 and ≤ 10 times the blank.
E	Applied to a sample result that was measured at a concentration greater than the calibration range of the method. It is applied when the detected analyte concentration exceeds the upper instrument calibration limit and further dilution is not feasible. The reported value is an estimated analyte concentration.
J	Applied to a sample result that is considered an estimated value.
JG	Applied to a sample result that is considered an estimated value with a low bias. This will typically be applied when QC results indicate the recovery of the analyte is below the expected limits of the method.
JL	Applied to a sample result that is considered an estimated value with a high bias. This will typically be applied when QC results indicate the recovery of the analyte is above the expected limits of the method.

ORGANIC CHEMISTRY Detection Limit Values

Method = EPA 3550B / 8270C (GC/MS)
LIMS Product = BNALL
ug/Kg wet weight basis

Analyte	MDL	RDL	Analyte	MDL	RDL
1,2,4-Trichlorobenzene	0.27	0.53	Benzo(g,h,i)perylene	2.7	5.3
1,2-Dichlorobenzene	0.27	0.53	Benzoic Acid	13	26.7
1,2-Diphenylhydrazine	2.7	5.3	Benzyl alcohol	5.3	10.7
1,3-Dichlorobenzene	0.27	0.53	Benzyl Butyl Phthalate	5.3	10.7
1,4-Dichlorobenzene	0.27	0.53	Bis(2-Chloroethoxy)Methane	13	26.7
2,4,5-Trichlorophenol	13	26.7	Bis(2-Chloroethyl)Ether	13	26.7
2,4,6-Trichlorophenol	13	26.7	Bis(2-Chloroisopropyl)Ether	13	26.7
2,4-Dichlorophenol	13	26.7	Bis(2-ethylhexyl)Phthalate	5.3	10.7
2,4-Dimethylphenol	2.7	5.3	Caffeine	5.3	10.7
2,4-Dinitrophenol	27	53.3	Carbazole	2.7	5.3
2,4-Dinitrotoluene	27	53.3	Chrysene	2.7	5.3
2,6-Dinitrotoluene	27	53.3	Coprostanol	53	107
2-Chloronaphthalene	5.3	10.7	Dibenzo(a,h)anthracene	2.7	5.3
2-Chlorophenol	5.3	10.7	Dibenzofuran	2.7	5.3
2-Methylnaphthalene	2.7	5.3	Diethyl Phthalate	5.3	10.7
2-Methylphenol	5.3	10.7	Dimethyl Phthalate	5.3	10.7
2-Nitroaniline	27	53.3	Di-N-Butyl Phthalate	5.3	10.7
2-Nitrophenol	27	53.3	Di-N-Octyl Phthalate	5.3	10.7
3,3'-Dichlorobenzidine	27	53.3	Fluoranthene	2.7	5.33
3-Methylphenol	5.3	10.7	Fluorene	2.7	5.33
3-Nitroaniline	27	53.3	Hexachlorobenzene	0.53	1.07
4,6-Dinitro-O-Cresol	27	53.3	Hexachlorobutadiene	1.3	2.7
4-Bromophenyl Phenyl Ether	13	26.7	Hexachlorocyclobutadiene	27	53.3
4-Chloro-3-Methylphenol	13	26.7	Hexachloroethane	13	26.7
4-Chloroaniline	27	53.3	Indeno(1,2,3-cd)Pyrene	2.7	5.3
4-Chlorophenyl Phenyl Ether	13	26.7	Isophorone	5.3	10.7
4-Methylphenol	5.3	10.7	Naphthalene	2.7	5.3
4-Nitroaniline	27	53.3	Nitrobenzene	5.3	10.7
4-Nitrophenol	27	53.3	N-Nitrosodimethylamine	13	26.7
Acenaphthene	2.7	5.33	N-Nitrosodi-N-Propylamine	5.3	10.7
Acenaphthylene	2.7	5.3	N-Nitrosodiphenylamine	5.3	10.7
Aniline	13	26.7	Pentachlorophenol	13	26.7
Anthracene	2.7	5.3	Phenanthrene	2.7	5.3
Benzo(a)anthracene	2.7	5.3	Phenol	5.3	10.7
Benzo(a)pyrene	2.7	5.3	Pyrene	2.7	5.3
Benzo(b)fluoranthene	2.7	5.3	Pyridine	26	53.3
Benzo(k)fluoranthene	2.7	5.3			

Method = EPA 8081A/8082 (GC/ECD)
LIMS Product = PESTLL
ug/Kg wet weight basis

Analyte	MDL	RDL
4,4'-DDD	0.67	1.33
4,4'-DDE	0.67	1.33
4,4'-DDT	0.67	1.33
Aldrin	0.67	1.33
Alpha-BHC	0.33	0.667
Alpha-Chlordane	0.33	0.667
Beta-BHC	0.33	0.667
Delta-BHC	0.33	0.667

Dieldrin	0.67	1.33
Endosulfan I	0.67	1.33
Endosulfan II	0.67	1.33
Endosulfan Sulfate	0.67	1.33
Endrin	0.67	1.33
Endrin Aldehyde	0.67	1.33
Gamma-BHC (Lindane)	0.33	0.667
Gamma-Chlordane	0.33	0.667
Heptachlor	0.33	0.667
Heptachlor Epoxide	0.33	0.667
Methoxychlor	3.3	6.67
Toxaphene	6.7	13.3

Method = EPA 8081A/8082 (GC/ECD)
LIMS Product = PCBLL
ug/Kg wet weight basis

Analyte	**MDL**	**RDL**
Aroclor 1016	0.83	1.67
Aroclor 1221	1.7	3.33
Aroclor 1232	1.7	3.33
Aroclor 1242	0.83	1.67
Aroclor 1248	0.83	1.67
Aroclor 1254	0.83	1.67
Aroclor 1260	0.83	1.67

Method = EPA 3550B / 8270C (GC/MS)
LIMS Product = EDC
ug/Kg wet weight basis

Analyte	**MDL**	**RDL**
Bis(2-ethylhexyl)adipate	10	20
Bisphenol A	10	20
Total 4-Nonylphenol	20	40

Method = NWTPH-DX (GC/FID)
LIMS Product = WTPH-Dx
mg/Kg wet weight basis

Analyte	**MDL**	**RDL**
Diesel range (C13 - C24)	25	25
Lube oil range (>C24)	25	25

CHAIN OF CUSTODY FORMS

SAMPLENUM	P51247-1	P51247-2	P51247-3
Login: P51247	7 SE PCBLL	7 SE PCBLL	7 SE PCBLL
	7 SE PESTLL	7 SE PESTLL	7 SE PESTLL
Project: 421240C	7 SE WTPH-DX	7 SE WTPH-DX	7 SE WTPH-DX
	RELINQUISHED BY: JEAN POWER	Date: 7/27/2010	Time: 1632
	RECEIVED BY: [illegible]	Date: 7-27-10	Time: 1632
	Sample Number(s): L51247	1-5	(All)

STREAMS SEDIMENTS- LEGACY 2010

Person: [illegible]

CHAIN OF CUSTODY

SAMPLENUM	P51247-1	P51247-2	P51247-3
QC LINK			
LOCATOR	'0478	A434	'00631
Short Loc. Desc.	LTLE BEAR	T_ST_LG-2	ISSMOUTH
Locator Desc	LITTLE BEAR CREEK//522 E, WOODINVILLE WA	THORNTON CREEK//ON NE 93RD ACROSS FROM M	ISSAQUAH CREEK MOUTH
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	Little Bear Creek-mouth JP	Thornton Creek-footbridge JP	Issaquah Creek-mouth
Start Date/Time	27-JUL-10/1135	27-JUL-10/0920	27-JUL-10/1305
End Date/Time	UNDER-1 D.S. OF TRAIL BRIDGE	JUST D.S. OF FOOTBRIDGE	UNDER PEDESTRIAN BRIDGE
Time Span			
Sample Depth			
SAMP INFO			
SED DEPTH	0-5 cm	0-10 cm	0-10 cm
SED TYPE	~~0-5~~ 32P21	23P26	23Ø21
Dept. Matrix Prod	BROWN SAND SILT W/P NAT. ODOR ~20 SPOONS	EXTRA JAR FOR PSD G-C BROWN SILT SAND W/P H2S SLIGHT ~8 CORE TUBES	BROWN SILT SAND Ø DEBRIS NAT ODOR LAMPREYS 8 SPOONS
	3 SE NH3-KCL	3 SE NH3-KCL	3 SE NH3-KCL
	3 SE ORTHOP-OL	3 SE ORTHOP-OL	3 SE ORTHOP-OL
	3 SE PH	3 SE PH	3 SE PH
	3 SE PSD	3 SE PSD	3 SE PSD
	3 SE TOC	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	~~5 SE FC-MPN~~ DELETED	~~5 SE FC-MPN~~	~~5 SE FC-MPN~~
	6 SE AG-ICPMS	6 SE AG-ICPMS	6 SE AG-ICPMS
	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT
	6 SE AS-ICPMS	6 SE AS-ICPMS	6 SE AS-ICPMS
	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT
	6 SE CD-ICPMS	6 SE CD-ICPMS	6 SE CD-ICPMS
	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT
	6 SE CR-ICPMS	6 SE CR-ICPMS	6 SE CR-ICPMS
	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT
	6 SE CU-ICPMS	6 SE CU-ICPMS	6 SE CU-ICPMS
	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NI-ICPMS	6 SE NI-ICPMS	6 SE NI-ICPMS
	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT
	6 SE PB-ICPMS	6 SE PB-ICPMS	6 SE PB-ICPMS
	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE ZN-ICPMS	6 SE ZN-ICPMS	6 SE ZN-ICPMS
	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE EDC	7 SE EDC	7 SE EDC
	7 SE EDC-LVI	7 SE EDC-LVI	7 SE EDC-LVI
	7 SE PBDE	7 SE PBDE	7 SE PBDE

SAMPLENUM	P51247-1	P51247-2	P51247-3
	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX

Login: P51247

STREAMS SEDIMENTS- LEGACY
2010

Personnel:_____

Project: 421240C

SAMPLENUM	P51247-4	P51247-5	P51247-6
QC LINK			
LOCATOR	'0432	'0474	'0322
Short Loc. Desc.	T_ST_LG-4	NORTH CR	NEWAK CR
Locator Desc	MCALEER CREEK//ON UPSTREAM SIDE OF SHORE	NORTH CREEK//UPSTREAM SIDE OF FREEWAY BR	NEWAUKUM CREEK//USGS GAGING STATION ON L
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	McAleer Creek	North Creek	Newaukum Creek
Start Date/Time	27-JUL-10/1015	27-JUL-10/1100	7/26/2010 / — MONDAY
End Date/Time	UNDER + D.S. OF BRIDGE — SEDIMENT	UNDER BRIDGE + BETWEEN ROCKS	SH/JP
Time Span	DEPOSITS EACH SIDE OF GRAVEL BAR	CHALLENGING TO FIND FINE MATERIAL	
Sample Depth			
SAMP INFO			
SED DEPTH	0-5 cm	0-5 cm	
SED TYPE	23 P 26	32 P 21	
Dept. Matrix Prod	3 SE NH3-KCL 3 SE ORTHOP-OL 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS ~~5 SE FC-MPN~~ 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC 7 SE EDC-LVI 7 SE PBDE	BROWN SILT SAND W/P H2S SL. ~15 SPOONS	3 SE NH3-KCL 3 SE ORTHOP-OL 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS ~~5 SE FC-MPN~~ 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC 7 SE EDC-LVI 7 SE PBDE	BROWN SAND SILT W/P NATURAL ~20 SPOONS	~~3 SE AVS~~ → DELETED 3 SE NH3-KCL 3 SE ORTHOP-OL 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS ~~5 SE FC-MPN~~ 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC 7 SE EDC-LVI

SAMPLENUM	P51247-4	P51247-5	P51247-6
	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX	7 SE PBDE 7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX

Login: P51247

STREAMS SEDIMENTS- LEGACY 2010

Personnel: SH/JP

Project: 421240C

Jean Powers 1557 7/26/10 ~~1557~~ 1557
7/26/10
L51247 6+7 → REST of SET TUESDAY, 7/27/10

SAMPLENUM	P51247-4	P51247-5	P51247-6
QC LINK			
LOCATOR	'0432	'0474	'0322
Short Loc. Desc.	T_ST_LG-4	NORTH CR	NEWAK CR
Locator Desc	MCALEER CREEK//ON UPSTREAM SIDE OF SHORE	NORTH CREEK//UPSTREAM SIDE OF FREEWAY BR	NEWAUKUM CREEK//USGS GAGING STATION ON L
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	McAleer Creek	North Creek	Newaukum Creek
Start Date/Time			26-JUL-10/0945
End Date/Time			SH/JP
Time Span			
Sample Depth			
SAMP INFO			ROAD END - "TRAIL" TO CREEK
SED DEPTH			0-5 cm
SED TYPE			32Ø2Ø
Dept. Matrix Prod			
	3 SE NH3-KCL	3 SE NH3-KCL	~~3 SE AVS~~ DELETED
	3 SE ORTHOP-OL	3 SE ORTHOP-OL	3 SE NH3-KCL
	3 SE PH	3 SE PH	3 SE ORTHOP-OL ~20 SPOONS
	3 SE PSD	3 SE PSD	3 SE PH BROWN
	3 SE TOC	3 SE TOC	3 SE PSD NO DEBRIS
	3 SE TOTS	3 SE TOTS	3 SE TOC NO ODOR
	~~5 SE FC-MPN~~ DELETED	~~5 SE FC-MPN~~	3 SE TOTS SAND
	6 SE AG-ICPMS	6 SE AG-ICPMS	~~5 SE FC-MPN~~ SILT
	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT	6 SE AG-ICPMS
	6 SE AS-ICPMS	6 SE AS-ICPMS	6 SE AG-SEM, EXT
	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT	6 SE AS-ICPMS
	6 SE CD-ICPMS	6 SE CD-ICPMS	6 SE AS-SEM, EXT
	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT	6 SE CD-ICPMS
	6 SE CR-ICPMS	6 SE CR-ICPMS	6 SE CD-SEM, EXT
	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT	6 SE CR-ICPMS
	6 SE CU-ICPMS	6 SE CU-ICPMS	6 SE CR-SEM, EXT
	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT	6 SE CU-ICPMS
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE CU-SEM, EXT
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-CVAA-M
	6 SE NI-ICPMS	6 SE NI-ICPMS	6 SE HG-SEM, EXT
	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT	6 SE NI-ICPMS
	6 SE PB-ICPMS	6 SE PB-ICPMS	6 SE NI-SEM, EXT
	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT	6 SE PB-ICPMS
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE PB-SEM, EXT
	6 SE ZN-ICPMS	6 SE ZN-ICPMS	6 SE P-ICPMS
	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT	6 SE ZN-ICPMS
	7 SE BNALLFULL	7 SE BNALLFULL	6 SE ZN-SEM, EXT
	7 SE EDC	7 SE EDC	7 SE BNALLFULL
	7 SE EDC-LVI	7 SE EDC-LVI	7 SE EDC
	7 SE PBDE	7 SE PBDE	7 SE EDC-LVI

Login: P51247

STREAMS SEDIMENTS- LEGACY
2010

Personnel: SH/JP

Project: 421240C

	(MONDAY)	(JEFF)	(JEFF)
SAMPLENUM	P51247-7	P51247-8	P51247-9
QC LINK			
LOCATOR	A320	'0317	A315
Short Loc. Desc.	BIG SOOS	SPRBR CR	MILL CR
Locator Desc	BIG SOOS CREEK//USGS GAGING STATION 1211	SPRINGBROOK CREEK//BRIDGE AT N END OF LO	HILL CREEK (MILL)//BRIDGE AT 68TH AND S
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	Soos Creek	Springbrook Creek-under bridge	Mill Creek
Start Date/Time	26-JUL-10/1035		
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	D.S. OF DRIVEWAY BRIDGE		
SED DEPTH	0-5 CM		
SED TYPE	32P26		
Dept. Matrix Prod	+AVS		
	3 SE NH3-KCL	3 SE NH3-KCL	3 SE NH3-KCL
	3 SE ORTHOP-OL	3 SE ORTHOP-OL	3 SE ORTHOP-OL
	3 SE PH BROWN	3 SE PH	3 SE PH
	3 SE PSD SAND-SILT	3 SE PSD	3 SE PSD
	3 SE TOC W/P	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	~~5 SE FC-MPN~~ SLIGHT	~~5 SE FC-MPN~~	~~5 SE FC-MPN~~
	6 SE AG-ICPMS 1/2S	6 SE AG-ICPMS	6 SE AG-ICPMS
	6 SE AG-SEM, EXT SLIGHT	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT
	6 SE AS-ICPMS OIL	6 SE AS-ICPMS	6 SE AS-ICPMS
	6 SE AS-SEM, EXT SHEEN	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT
	6 SE CD-ICPMS	6 SE CD-ICPMS	6 SE CD-ICPMS
	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT
	6 SE CR-ICPMS	6 SE CR-ICPMS	6 SE CR-ICPMS
	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT
	6 SE CU-ICPMS	6 SE CU-ICPMS	6 SE CU-ICPMS
	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NI-ICPMS	6 SE NI-ICPMS	6 SE NI-ICPMS
	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT
	6 SE PB-ICPMS	6 SE PB-ICPMS	6 SE PB-ICPMS
	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE ZN-ICPMS	6 SE ZN-ICPMS	6 SE ZN-ICPMS
	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE EDC	7 SE EDC	7 SE EDC
	7 SE EDC-LVI	7 SE EDC-LVI	7 SE EDC-LVI
	7 SE PBDE	7 SE PBDE	7 SE PBDE
	~20 SPOONS		

Login: P51247

STREAMS SEDIMENTS- LEGACY
2010

Personnel: JD

Project: 421240C

CLAIM TO BE RELINQUISHED BY: 7/27/10 1513
7-27-10 1513

SAMPLENUM	P51247-7	P51247-8	P51247-9
QC LINK			
LOCATOR	A320	'0317	A315
Short Loc. Desc.	BIG SOOS	SPRBR CR	MILL CR
Locator Desc	BIG SOOS CREEK//USGS GAGING STATION 1211	SPRINGBROOK CREEK//BRIDGE AT N END OF LO	HILL CREEK (MILL)//BRIDGE AT 68TH AND S
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	Soos Creek	Springbrook Creek-under bridge	Mill Creek
Start Date/Time		7/28/10 1005	27-JUL-10 1105
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO		UNDER BRIDGE U.S. OF WQ SITE	
SED DEPTH		0-5 cm	0-5 cm
SED TYPE		2ØP21	2ØP2Ø
Dept. Matrix Prod	AVS 3 SE NH3-KCL 3 SE ORTHOP-OL 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS ~~5 SE FC-MPN~~ 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC 7 SE EDC-LVI 7 SE PBDE	3 SE NH3-KCL 3 SE ORTHOP-OL ~~[illegible]~~ 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS ~~5 SE FC-MPN~~ 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC 7 SE EDC-LVI 7 SE PBDE BROWN SILT no 2° natural nonspec. odor 21 spoonfuls GREAT DEPOSITIONAL AREAS ALONG LEFT BANK UNDER BRIDGE ON TRAIL	3 SE NH3-KCL 3 SE ORTHOP-OL 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS ~~5 SE FC-MPN~~ 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC 7 SE EDC-LVI 7 SE PBDE BROWN SILT/MUD twigs no odor Lot of deposition at normal water quality site

SAMPLENUM	P51247-7	P51247-8	P51247-9
	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX

Login: P51247

STREAMS SEDIMENTS- LEGACY
2010

Personnel: JD

Project: 421240C

SAMPLENUM	P51247-10		
QC LINK			
LOCATOR	'0484		
Short Loc. Desc.	BEAR EVANS		
Locator Desc	BEAR CREEK//FIRST RAILROAD BRIDGE SOUTH		
SITE	STREAMS		
COMMENTS	~~Mill Creek~~ BEAR-EVANS		
Start Date/Time	27-JUL-10/1249		
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO			
SED DEPTH	0-5 cm		
SED TYPE	20P26		
Dept. Matrix Prod			

3 SE NH3-KCL
3 SE ORTHOP-OL
3 SE PH
3 SE PSD
3 SE TOC
3 SE TOTS
~~5 SE FC-MPN~~
6 SE AG-ICPMS
6 SE AG-SEM, EXT
6 SE AS-ICPMS
6 SE AS-SEM, EXT
6 SE CD-ICPMS
6 SE CD-SEM, EXT
6 SE CR-ICPMS
6 SE CR-SEM, EXT
6 SE CU-ICPMS
6 SE CU-SEM, EXT
6 SE HG-CVAA-M
6 SE HG-SEM, EXT
6 SE NI-ICPMS
6 SE NI-SEM, EXT
6 SE PB-ICPMS
6 SE PB-SEM, EXT
6 SE P-ICPMS
6 SE ZN-ICPMS
6 SE ZN-SEM, EXT
7 SE BNALLFULL
7 SE EDC
7 SE EDC-LVI
7 SE PBDE

BROWN 14 spoonfuls
silt/mud (more like soft peat)
2° = plant material
slight H_2S

Go to regular water site - enter from 520 on ramp
40' short of bridge take trail on right toward 30' high willow.
10' before willow take a sharp right on trail to river.
site on left bank even with west corner of fishing barge.
Mouth is totally closed off with fences (mechanical barriers)

SAMPLENUM	P51247-10		
	7 SE PCBLL 7 SE PESTLL 7 SE WTPH-DX		

Login: P51298

STREAMS SEDS- BASIN STUDY
2010

Personnel: SH/JP

Project: 421240C

CHAIN OF CUSTODY

RELINQUISHED BY	Date	Time
JEAN POWER	7/26/10	1557
RECEIVED BY	**Date**	**Time**
[illegible]	7-26-10	1557
Sample Number(s)		(All)
L51298 1-10 (YA320)		

SAMPLENUM	P51298-1	P51298-2	P51298-3
QC LINK			
LOCATOR	'0320	AA320	GG320
Short Loc. Desc.	SOOS CR	BSOOSRR	BIGSOOS
Locator Desc	BIG SOOS CREEK//FOOTBRIDGE AT HATCHERY N	BIG SOOS CREEK, DOWNSTREAM OF JENKINS, E	BIG SOOS CREEK DOWNSTREAM OF KENT BLACK
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	Footbridge d.s. of hatchery	154th SE/SE 296th St. TMDL	Kent-Blk Dia. Rd. SE 288th Ln.
Start Date/Time	26-JUL-10/1020	26-JUL-10/1115	26-JUL-10/1145
End Date/Time		HIGH-ISH GRADIENT- NOT MANY FINES	BEAVER DAM ON U.S. SIDE OF BRIDGE
Time Span			
Sample Depth			
PERSONNEL	SH/JP	SH/JP	SH/JP
SAMP INFO			
SED DEPTH	0-5 cm	0-5	0-5
SED TYPE	32P26	34P20	23P26
Dept. Matrix Prod	BROWN, ~~NO OD~~ SLIGHT H2S, W/P ~20 SPOONS SAND SILT	BROWN SAND GRAVEL W/P NO ODOR ~20 SPOON	BROWN SILT SAND SL. H2S W/P
	3 SE AVS	3 SE AVS	3 SE AVS
	3 SE NH3-KCL	3 SE NH3-KCL	3 SE NH3-KCL
	3 SE ORTHOP-OL	3 SE ORTHOP-OL	3 SE ORTHOP-OL
	3 SE PH	3 SE PH	3 SE PH
	3 SE PSD	3 SE PSD	3 SE PSD
	3 SE TOC	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	6 SE AG-ICPMS	6 SE AG-ICPMS	6 SE AG-ICPMS
	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT
	6 SE AS-ICPMS	6 SE AS-ICPMS	6 SE AS-ICPMS
	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT
	6 SE CD-ICPMS	6 SE CD-ICPMS	6 SE CD-ICPMS
	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT
	6 SE CR-ICPMS	6 SE CR-ICPMS	6 SE CR-ICPMS
	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT
	6 SE CU-ICPMS	6 SE CU-ICPMS	6 SE CU-ICPMS
	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NI-ICPMS	6 SE NI-ICPMS	6 SE NI-ICPMS
	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT
	6 SE PB-ICPMS	6 SE PB-ICPMS	6 SE PB-ICPMS
	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE ZN-ICPMS	6 SE ZN-ICPMS	6 SE ZN-ICPMS
	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE EDC	7 SE EDC	7 SE EDC

WG110837
R 148005

Login: P51298

STREAMS SEDS- BASIN STUDY
2010

Personnel: SH/JP

Project: 421240C

SAMPLENUM	P51298-4	P51298-5	P51298-6
QC LINK			
LOCATOR	Q320	HH320	P320
Short Loc. Desc.	Big_Soos	SOOS CR	BSOOS256th
Locator Desc	BIG SOOS CR. AT SE 272 NEAR FIRE STATION	BIG SOOS CREEK AT TRAIL BRIDGE DOWNSTREA	BIG SOOS 256TH
SITE	STREAMS	STREAMS	STREAMS
COMMENTS	Kent-Kangly/160th	G. Grant Pk@256th St.	G. Grant Pk@148th Ave. SE
Start Date/Time	26-JUL-10/1205	26-JUL-10/1235	26-JUL-10/1~~235~~ 1300
End Date/Time	MUCH FINE, FLOCY MATERIAL		
Time Span			
Sample Depth			
PERSONNEL	SH/JP	SH/JP	SH/JP
SAMP INFO			
SED DEPTH	0-10 cm	0-10 cm	0-10 cm
SED TYPE	23P26	23P20	23P21
Dept. Matrix Prod	BROWN SILT, SAND W/P SLIGHT H2S	BROWN SILT SAND W/P NO ODOR	BROWN SILT SAND W/P NAT ODOR
	3 SE AVS	3 SE AVS	3 SE AVS
	3 SE NH3-KCL	3 SE NH3-KCL	3 SE NH3-KCL
	3 SE ORTHOP-OL	3 SE ORTHOP-OL	3 SE ORTHOP-OL
	3 SE PH	3 SE PH	3 SE PH
	3 SE PSD	3 SE PSD	3 SE PSD
	3 SE TOC	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	6 SE AG-ICPMS	6 SE AG-ICPMS	6 SE AG-ICPMS
	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT
	6 SE AS-ICPMS	6 SE AS-ICPMS	6 SE AS-ICPMS
	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT
	6 SE CD-ICPMS	6 SE CD-ICPMS	6 SE CD-ICPMS
	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT
	6 SE CR-ICPMS	6 SE CR-ICPMS	6 SE CR-ICPMS
	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT
	6 SE CU-ICPMS	6 SE CU-ICPMS	6 SE CU-ICPMS
	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NI-ICPMS	6 SE NI-ICPMS	6 SE NI-ICPMS
	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT
	6 SE PB-ICPMS	6 SE PB-ICPMS	6 SE PB-ICPMS
	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE ZN-ICPMS	6 SE ZN-ICPMS	6 SE ZN-ICPMS
	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE EDC	7 SE EDC	7 SE EDC

Login: P51298

STREAMS SEDS- BASIN STUDY
2010

Personnel:_____

Project: 421240C

✓ FIX LOCATOR

SAMPLENUM	P51298-7	P51298-8	P51298-9
QC LINK	II320		
LOCATOR	H320 ~~HH320~~	RR320	SS320
Short Loc. Desc.	T_ST_SD-7	SOOS CR	SOOS CR
Locator Desc	~~JENKINS CREEK TRIB//LAKE LUCERNE OUTLET~~	BIG SOOS CREEK NEAR TRAIL CROSSING S.E.	BIG SOOS CREEK-GARY GRANT PARK AT 208TH
SITE	STREAMS SOOS CREEK	STREAMS	STREAMS
COMMENTS	Trail -Y at 148th/240th	Trail-SE 224th wetland	G. Grant Pk.@208th
Start Date/Time	26-JUL-10/1320	→ /1356	26-JUL-10/1415
End Date/Time	FOUND LOVELY TERRA COTTA CANDLES...	almost no flow - Water surface	OVER FENCE AT STREAM OVERLOOK PLATFORM
Time Span		Stagnant- pondweed difficult to sample	
Sample Depth			
PERSONNEL	SH/JP	SH/JP	SH/JP
SAMP INFO			
SED DEPTH	0-10 cm	0-~~10~~ 5 cm	0-5 cm
SED TYPE	23P26	34P36	32P21
Dept. Matrix Prod	BROWN SILT SAND W/P H2S-SL	sand, gravel w/p bowish gray H2S-Slight	BROWN SAND SILT W/P NAT ODOR ~25 SPOONS MUSSELS
	3 SE AVS	3 SE AVS	3 SE AVS
	3 SE NH3-KCL	3 SE NH3-KCL	3 SE NH3-KCL
	3 SE ORTHOP-OL	3 SE ORTHOP-OL	3 SE ORTHOP-OL
	3 SE PH	3 SE PH	3 SE PH
	3 SE PSD	3 SE PSD	3 SE PSD
	3 SE TOC	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	6 SE AG-ICPMS	6 SE AG-ICPMS	6 SE AG-ICPMS
	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT	6 SE AG-SEM, EXT
	6 SE AS-ICPMS	6 SE AS-ICPMS	6 SE AS-ICPMS
	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT	6 SE AS-SEM, EXT
	6 SE CD-ICPMS	6 SE CD-ICPMS	6 SE CD-ICPMS
	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT	6 SE CD-SEM, EXT
	6 SE CR-ICPMS	6 SE CR-ICPMS	6 SE CR-ICPMS
	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT	6 SE CR-SEM, EXT
	6 SE CU-ICPMS	6 SE CU-ICPMS	6 SE CU-ICPMS
	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT	6 SE CU-SEM, EXT
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NI-ICPMS	6 SE NI-ICPMS	6 SE NI-ICPMS
	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT	6 SE NI-SEM, EXT
	6 SE PB-ICPMS	6 SE PB-ICPMS	6 SE PB-ICPMS
	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT	6 SE PB-SEM, EXT
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE ZN-ICPMS	6 SE ZN-ICPMS	6 SE ZN-ICPMS
	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT	6 SE ZN-SEM, EXT
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE EDC	7 SE EDC	7 SE EDC

Login: P51298

Project: 421240C

STREAMS SEDS- BASIN STUDY
2010

Personnel: JP/SH

SAMPLENUM	**P51298-10**		
QC LINK			
LOCATOR	**L320**		
Short Loc. Desc.	Big_Soos		
Locator Desc	BIG SOOS AT GRANT PARK		
SITE	STREAMS		
COMMENTS	Lake Young's Way/SE 204th		
Start Date/Time	26-JUL-10/1445		
End Date/Time	POOL JUST U.S. UP CULVERT UNDER ROAD		
Time Span			
Sample Depth			
PERSONNEL	SH/JP		
SAMP INFO			
SED DEPTH	0-5 cm		
SED TYPE	3 2P 21		
Dept. Matrix Prod	3 SE AVS 3 SE NH3-KCL 3 SE ORTHOP-OL 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE AG-ICPMS 6 SE AG-SEM, EXT 6 SE AS-ICPMS 6 SE AS-SEM, EXT 6 SE CD-ICPMS 6 SE CD-SEM, EXT 6 SE CR-ICPMS 6 SE CR-SEM, EXT 6 SE CU-ICPMS 6 SE CU-SEM, EXT 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NI-ICPMS 6 SE NI-SEM, EXT 6 SE PB-ICPMS 6 SE PB-SEM, EXT 6 SE P-ICPMS 6 SE ZN-ICPMS 6 SE ZN-SEM, EXT 7 SE BNALLFULL 7 SE EDC	BROWN SAND SILT W/S NAT ODOR	

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110545 AVS

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-7	421240C-300	Freshwater Streams Sediment	CVAVS	FRSHWTRSED	7/26/2010 10:35	8/4/2010 10:35	8/4/2010 12:13	WG110545-1,-2,-3,-4,-5,-6,-7	
L51298-1	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 10:20	8/3/2010 10:05	8/3/2010 13:48		
L51298-2	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 11:15	8/3/2010 10:05	8/3/2010 13:48		
L51298-3	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 11:45	8/3/2010 10:05	8/3/2010 13:48		
L51298-4	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 12:05	8/3/2010 10:05	8/3/2010 13:48		
L51298-5	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 12:35	8/3/2010 10:05	8/3/2010 13:48		
L51298-6	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 13:00	8/3/2010 10:05	8/3/2010 13:48		
L51298-7	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 13:20	8/3/2010 10:05	8/3/2010 13:48		
L51298-8	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 13:50	8/3/2010 10:05	8/3/2010 13:48		
L51298-9	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 14:15	8/4/2010 10:35	8/4/2010 12:13		
L51298-10	421240C-300		CVAVS	FRSHWTRSED	7/26/2010 14:45	8/4/2010 10:35	8/4/2010 12:13		
WG110545-1	MB		CVAVS	OTHR SOLID		8/3/2010 10:05	8/3/2010 13:48		MB1 8/3/10
WG110545-2	SB		CVAVS	OTHR SOLID		8/3/2010 10:05	8/3/2010 13:48		WG110545-1
WG110545-3	LD		CVAVS	FRSHWTRSED		8/3/2010 10:05	8/3/2010 13:48		L51298-3
WG110545-4	LT		CVAVS	FRSHWTRSED		8/3/2010 10:05	8/3/2010 13:48		WG110545-3 L51298-3
WG110545-5	MS		CVAVS	FRSHWTRSED		8/3/2010 10:05	8/3/2010 13:48		L51298-3
WG110545-6	MB		CVAVS	OTHR SOLID		8/4/2010 10:35	8/4/2010 12:13		MB1 8/4/10
WG110545-7	SB		CVAVS	OTHR SOLID		8/4/2010 10:35	8/4/2010 12:13		WG110545-6

WG110446 Ammonia

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	CVNH3-KCL	FRSHWTRSED	7/27/2010 11:35	7/30/2010 13:00	8/13/2010 15:35	WG110446-1,-4,-5,-6,-2,-3	
L51247-2	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 9:20	7/30/2010 13:00	8/13/2010 14:28		
L51247-3	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 13:05	7/30/2010 13:00	8/13/2010 14:30		
L51247-4	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 10:15	7/30/2010 13:00	8/13/2010 14:32		
L51247-5	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 11:00	7/30/2010 13:00	8/13/2010 15:37		
L51247-6	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 9:45	7/30/2010 13:00	8/13/2010 14:36		
L51247-7	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 10:35	7/30/2010 13:00	8/13/2010 14:38		
L51247-8	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 10:05	7/30/2010 13:00	8/13/2010 14:55		
L51247-9	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 11:05	7/30/2010 13:00	8/13/2010 14:57		
L51247-10	421240C-300		CVNH3-KCL	FRSHWTRSED	7/27/2010 12:49	7/30/2010 13:00	8/13/2010 14:59		
L51298-1	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 10:20	7/30/2010 13:00	8/13/2010 15:01		
L51298-2	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 11:15	7/30/2010 13:00	8/13/2010 15:03		
L51298-3	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 11:45	7/30/2010 13:00	8/13/2010 15:05		
L51298-4	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 12:05	7/30/2010 13:00	8/13/2010 15:07		
L51298-5	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 12:35	7/30/2010 13:00	8/13/2010 15:10		
L51298-6	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 13:00	7/30/2010 13:00	8/13/2010 15:12		
L51298-7	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 13:20	7/30/2010 13:00	8/13/2010 16:13		
L51298-8	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 13:50	7/30/2010 13:00	8/13/2010 16:16		
L51298-9	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 14:15	7/30/2010 13:00	8/13/2010 15:26		
L51298-10	421240C-300		CVNH3-KCL	FRSHWTRSED	7/26/2010 14:45	7/30/2010 13:00	8/13/2010 15:28		
WG110446-1	MB		CVNH3-KCL	OTHR SOLID		7/30/2010 13:00	8/13/2010 14:11		CONNUTS1
WG110446-2	SB		CVNH3-KCL	OTHR SOLID		7/30/2010 13:00	8/13/2010 15:30		WG110446-1
WG110446-3	LCS		CVNH3-KCL	OTHR SOLID		7/30/2010 13:00	8/13/2010 15:33		LEVEL1
WG110446-4	LD		CVNH3-KCL	FRSHWTRSED		7/30/2010 13:00	8/13/2010 14:40		L51247-7
WG110446-5	LT		CVNH3-KCL	FRSHWTRSED		7/30/2010 13:00	8/13/2010 14:42		WG110446-4 L51247-7
WG110446-6	MS		CVNH3-KCL	FRSHWTRSED		7/30/2010 13:00	8/13/2010 14:45		L51247-7

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG111574 Orthophosphate Phosphorus

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams	CVORTHOP-OL	FRSHWTRSED	7/27/2010 11:35	10/11/2010 13:45	10/12/2010 12:58	WG111574-1,-2,-4,-5,-	
L51247-2	421240C-300	Sediment	CVORTHOP-OL	FRSHWTRSED	7/27/2010 9:20	10/11/2010 13:45	10/12/2010 12:58	6,-7,-9,-10,-11,-3,-8	
L51247-3	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/27/2010 13:05	10/11/2010 13:45	10/12/2010 12:58		
L51247-4	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/27/2010 10:15	10/11/2010 13:45	10/12/2010 12:58		
L51247-5	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/27/2010 11:00	10/11/2010 13:45	10/12/2010 12:58		
L51247-6	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 9:45	10/11/2010 13:45	10/12/2010 12:58		
L51247-7	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 10:35	10/11/2010 13:45	10/12/2010 12:58		
L51247-8	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/27/2010 10:05	10/11/2010 13:45	10/12/2010 12:58		
L51247-9	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/27/2010 11:05	10/11/2010 13:45	10/12/2010 12:58		
L51247-10	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/27/2010 12:49	10/11/2010 13:45	10/12/2010 12:58		
L51298-1	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 10:20	10/11/2010 13:45	10/12/2010 12:58		
L51298-2	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 11:15	10/11/2010 13:45	10/12/2010 12:58		
L51298-3	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 11:45	10/11/2010 13:45	10/12/2010 12:58		
L51298-4	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 12:05	10/11/2010 13:45	10/12/2010 12:58		
L51298-5	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 12:35	10/11/2010 13:45	10/12/2010 12:58		
L51298-6	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 13:00	10/11/2010 13:45	10/12/2010 12:58		
L51298-7	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 13:20	10/11/2010 13:45	10/12/2010 12:58		
L51298-8	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 13:50	10/11/2010 13:45	10/12/2010 12:58		
L51298-9	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 14:15	10/11/2010 13:45	10/12/2010 12:58		
L51298-10	421240C-300		CVORTHOP-OL	FRSHWTRSED	7/26/2010 14:45	10/11/2010 13:45	10/12/2010 12:58		
L51549-2	421235	MAJOR LAKES (wtr col)	CVORTHOP-OL	FRSHWTRSED	8/24/2010 9:15	10/11/2010 13:45	10/12/2010 12:58		
L51549-4	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 9:40	10/11/2010 13:45	10/12/2010 12:58		
L51549-6	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 10:30	10/11/2010 13:45	10/12/2010 12:58		
L51549-8	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 10:00	10/11/2010 13:45	10/12/2010 12:58		
L51549-10	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 9:48	10/11/2010 13:45	10/12/2010 12:58		
L51549-12	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 11:15	10/11/2010 13:45	10/12/2010 12:58		
L51549-14	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 12:00	10/11/2010 13:45	10/12/2010 12:58		
L51549-16	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 12:20	10/11/2010 13:45	10/12/2010 12:58		
L51549-18	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 10:50	10/11/2010 13:45	10/12/2010 12:58		
L51549-20	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 13:15	10/11/2010 13:45	10/12/2010 12:58		
L51549-22	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 12:55	10/11/2010 13:45	10/12/2010 12:58		
L51549-24	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 14:30	10/11/2010 13:45	10/12/2010 12:58		
L51549-26	421235		CVORTHOP-OL	FRSHWTRSED	8/23/2010 13:50	10/11/2010 13:45	10/12/2010 12:58		
L51549-28	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 11:20	10/11/2010 13:45	10/12/2010 12:58		
L51549-30	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 11:40	10/11/2010 13:45	10/12/2010 12:58		
L51549-32	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 9:50	10/11/2010 13:45	10/12/2010 12:58		
L51549-34	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 11:37	10/11/2010 13:45	10/12/2010 12:58		
L51549-36	421235		CVORTHOP-OL	FRSHWTRSED	8/24/2010 14:05	10/11/2010 13:45	10/12/2010 12:58		
L51549-38	421235		CVORTHOP-OL	FRSHWTRSED	8/25/2010 8:58	10/11/2010 13:45	10/12/2010 12:58		
L51549-40	421235		CVORTHOP-OL	FRSHWTRSED	8/25/2010 9:35	10/11/2010 13:45	10/12/2010 12:58		
WG111574-1	MB		CVORTHOP-OL	OTHR SOLID		10/11/2010 13:45	10/12/2010 12:58		CONNUTS1
WG111574-2	SB		CVORTHOP-OL	OTHR SOLID		10/11/2010 13:45	10/12/2010 12:58		WG111574-1
WG111574-3	LCS		CVORTHOP-OL	OTHR SOLID		10/12/2010 14:00	10/12/2010 12:58		LEVEL1

WG111574-4	LD	CVORTHOP-OL	FRSHWTRSED	10/11/2010 13:45	10/12/2010 12:58		L51247-4
WG111574-5	LT	CVORTHOP-OL	FRSHWTRSED	10/11/2010 13:45	10/12/2010 12:58		WG111574-4 L51247-4
WG111574-6	MS	CVORTHOP-OL	FRSHWTRSED	10/11/2010 13:45	10/12/2010 12:58		L51247-4
WG111574-7	MB	CVORTHOP-OL	OTHR SOLID	10/11/2010 13:45	10/12/2010 12:58		CONNUTS1
WG111574-8	LCS	CVORTHOP-OL	OTHR SOLID	10/12/2010 14:00	10/12/2010 12:58		LEVEL1
WG111574-9	LD	CVORTHOP-OL	FRSHWTRSED	10/11/2010 13:45	10/12/2010 12:58		L51549-20
WG111574-10	LT	CVORTHOP-OL	FRSHWTRSED	10/11/2010 13:45	10/12/2010 12:58		WG111574-9 L51549-20
WG111574-11	MS	CVORTHOP-OL	FRSHWTRSED	10/11/2010 13:45	10/12/2010 12:58		L51549-20

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110361 pH

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	CVPH	FRSHWTRSED	7/27/2010 11:35	7/28/2010 8:30	7/28/2010 9:37	WG110361-2,-3	
L51247-2	421240C-300		CVPH	FRSHWTRSED	7/27/2010 9:20	7/28/2010 8:30	7/28/2010 9:40		
L51247-3	421240C-300		CVPH	FRSHWTRSED	7/27/2010 13:05	7/28/2010 8:30	7/28/2010 9:42		
L51247-4	421240C-300		CVPH	FRSHWTRSED	7/27/2010 10:15	7/28/2010 8:30	7/28/2010 9:45		
L51247-5	421240C-300		CVPH	FRSHWTRSED	7/27/2010 11:00	7/28/2010 8:30	7/28/2010 9:47		
L51247-6	421240C-300		CVPH	FRSHWTRSED	7/26/2010 9:45	7/27/2010 10:45	7/27/2010 11:13		
L51247-7	421240C-300		CVPH	FRSHWTRSED	7/26/2010 10:35	7/27/2010 10:45	7/27/2010 11:15		
L51247-8	421240C-300		CVPH	FRSHWTRSED	7/27/2010 10:05	7/28/2010 8:30	7/28/2010 9:50		
L51247-9	421240C-300		CVPH	FRSHWTRSED	7/27/2010 11:05	7/28/2010 8:30	7/28/2010 9:54		
L51247-10	421240C-300		CVPH	FRSHWTRSED	7/27/2010 12:49	7/28/2010 8:30	7/28/2010 10:00		
L51298-1	421240C-300		CVPH	FRSHWTRSED	7/26/2010 10:20	7/27/2010 10:45	7/27/2010 11:17		
L51298-2	421240C-300		CVPH	FRSHWTRSED	7/26/2010 11:15	7/27/2010 10:45	7/27/2010 11:18		
L51298-3	421240C-300		CVPH	FRSHWTRSED	7/26/2010 11:45	7/27/2010 10:45	7/27/2010 11:20		
L51298-4	421240C-300		CVPH	FRSHWTRSED	7/26/2010 12:05	7/27/2010 10:45	7/27/2010 11:21		
L51298-5	421240C-300		CVPH	FRSHWTRSED	7/26/2010 12:35	7/27/2010 10:45	7/27/2010 11:22		
L51298-6	421240C-300		CVPH	FRSHWTRSED	7/26/2010 13:00	7/27/2010 10:45	7/27/2010 11:23		
L51298-7	421240C-300		CVPH	FRSHWTRSED	7/26/2010 13:20	7/27/2010 10:45	7/27/2010 11:25		
L51298-8	421240C-300		CVPH	FRSHWTRSED	7/26/2010 13:50	7/27/2010 10:45	7/27/2010 11:26		
L51298-9	421240C-300		CVPH	FRSHWTRSED	7/26/2010 14:15	7/27/2010 10:45	7/27/2010 11:28		
L51298-10	421240C-300		CVPH	FRSHWTRSED	7/26/2010 14:45	7/27/2010 10:45	7/27/2010 11:30		
WG110361-1	CS		CVPH	BLANK WTR		7/27/2010 11:12	7/27/2010 11:12	WG110361-1,-4,-5	LEVEL1
WG110361-2	LD		CVPH	FRSHWTRSED		7/27/2010 10:45	7/27/2010 11:32	WG110361-2,-3	L51298-10
WG110361-3	LT		CVPH	FRSHWTRSED		7/27/2010 10:45	7/27/2010 11:34		WG110361-2 L51298-10
WG110361-4	CS		CVPH	BLANK WTR		7/27/2010 11:35	7/27/2010 11:35	WG110361-1,-4,-5	LEVEL2
WG110361-5	CS		CVPH	BLANK WTR		7/28/2010 9:35	7/28/2010 9:35		LEVEL1

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG111141 PSD

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	CVPSD	FRSHWTRSED	7/27/2010 11:35	7-Sep-10	16-Sep-10	WG111141-3,-4	
L51247-2	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 9:20	7-Sep-10	16-Sep-10		
L51247-3	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 13:05	7-Sep-10	16-Sep-10		
L51247-4	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 10:15	7-Sep-10	16-Sep-10		
L51247-5	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 11:00	7-Sep-10	16-Sep-10		
L51247-6	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 9:45	7-Sep-10	16-Sep-10		
L51247-7	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 10:35	7-Sep-10	16-Sep-10		
L51247-8	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 10:05	7-Sep-10	16-Sep-10		
L51247-9	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 11:05	7-Sep-10	16-Sep-10		
L51247-10	421240C-300		CVPSD	FRSHWTRSED	7/27/2010 12:49	7-Sep-10	16-Sep-10		
L51298-1	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 10:20	7-Oct-10	13-Oct-10		
L51298-2	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 11:15	7-Oct-10	13-Oct-10		
L51298-3	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 11:45	7-Oct-10	13-Oct-10		
L51298-4	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 12:05	7-Oct-10	13-Oct-10		
L51298-5	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 12:35	7-Oct-10	13-Oct-10		
L51298-6	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 13:00	7-Oct-10	13-Oct-10		
L51298-7	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 13:20	7-Oct-10	13-Oct-10		
L51298-8	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 13:50	7-Oct-10	13-Oct-10		
L51298-9	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 14:15	7-Oct-10	13-Oct-10		
L51298-10	421240C-300		CVPSD	FRSHWTRSED	7/26/2010 14:45	7-Oct-10	13-Oct-10		
WG111141-3	LD		CVPSD	FRSHWTRSED		7-Sep-10	16-Sep-10		L51247-2
WG111141-4	LT		CVPSD	FRSHWTRSED		7-Sep-10	16-Sep-10		WG111141-3 L51247-2

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110748 TOC

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	CVTOC	FRSHWTRSED	7/27/2010 11:35	8/9/2010 15:45	9/15/2010 12:53	WG110748-1,-2,-3,-4,-6,-7,-8,-5	
L51247-2	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 9:20	8/9/2010 15:45	9/15/2010 13:14		
L51247-3	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 13:05	8/9/2010 15:45	9/15/2010 13:35		
L51247-4	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 10:15	8/9/2010 15:45	9/15/2010 13:56		
L51247-5	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 11:00	8/9/2010 15:45	9/16/2010 8:57		
L51247-6	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 9:45	8/9/2010 15:45	9/16/2010 9:18		
L51247-7	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 10:35	8/9/2010 15:45	9/16/2010 9:40		
L51247-8	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 10:05	8/9/2010 15:45	9/16/2010 10:01		
L51247-9	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 11:05	8/9/2010 15:45	9/16/2010 10:22		
L51247-10	421240C-300		CVTOC	FRSHWTRSED	7/27/2010 12:49	8/9/2010 15:45	9/16/2010 10:43		
L51298-1	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 10:20	8/9/2010 15:45	9/15/2010 9:05		
L51298-2	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 11:15	8/9/2010 15:45	9/15/2010 9:26		
L51298-3	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 11:45	8/9/2010 15:45	9/15/2010 9:57		
L51298-4	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 12:05	8/9/2010 15:45	9/15/2010 10:18		
L51298-5	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 12:35	8/9/2010 15:45	9/15/2010 10:47		
L51298-6	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 13:00	8/9/2010 15:45	9/15/2010 11:10		
L51298-7	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 13:20	8/9/2010 15:45	9/15/2010 11:31		
L51298-8	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 13:50	8/9/2010 15:45	9/15/2010 11:53		
L51298-9	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 14:15	9/15/2010 12:09	9/16/2010 13:00		
L51298-10	421240C-300		CVTOC	FRSHWTRSED	7/26/2010 14:45	8/9/2010 15:45	9/15/2010 12:13		
WG110748-1	MB		CVTOC	OTHR SOLID		9/14/2010 11:45	9/14/2010 11:45		MB1 100914
WG110748-2	SRM		CVTOC	OTHR SOLID		9/14/2010 12:18	9/14/2010 12:18		HICONC
WG110748-3	MB		CVTOC	OTHR SOLID		9/15/2010 8:49	9/15/2010 8:49		MB1 100915
WG110748-4	MB		CVTOC	OTHR SOLID		9/16/2010 8:37	9/16/2010 8:37		MB1 100916
WG110748-5	SB		CVTOC	OTHR SOLID		9/16/2010 12:32	9/16/2010 12:32		WG110748-4
WG110748-6	LD		CVTOC	FRSHWTRSED		9/15/2010 12:09	9/16/2010 13:14		L51298-9
WG110748-7	LT		CVTOC	FRSHWTRSED		9/15/2010 12:09	9/16/2010 13:36		WG110748-6 L51298-9
WG110748-8	MS		CVTOC	FRSHWTRSED		9/15/2010 12:09	9/16/2010 13:57		L51298-9

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110785 Total Solids

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	CVTOTS	FRSHWTRSED	7/27/2010 11:35	8/16/2010 14:30	8/17/2010 9:42	WG110785-2,-3,-1,-4,-5	
L51247-2	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 9:20	8/16/2010 14:30	8/17/2010 9:41		
L51247-3	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 13:05	8/16/2010 14:30	8/17/2010 9:41		
L51247-4	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 10:15	8/16/2010 14:30	8/17/2010 9:41		
L51247-5	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 11:00	8/16/2010 14:30	8/17/2010 9:40		
L51247-6	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 9:45	8/16/2010 14:30	8/17/2010 9:55		
L51247-7	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 10:35	8/16/2010 14:30	8/17/2010 9:55		
L51247-8	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 10:05	8/16/2010 14:30	8/17/2010 9:55		
L51247-9	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 11:05	8/16/2010 14:30	8/17/2010 9:39		
L51247-10	421240C-300		CVTOTS	FRSHWTRSED	7/27/2010 12:49	8/16/2010 14:30	8/17/2010 9:39		
L51278-1	421195-180	Mercer Island Stormwater Monitoring	CVTOTS	FRSHWTRSED	7/27/2010 14:00	8/16/2010 14:30	8/17/2010 9:48	WG110783-1,WG110785-2,-3,-1,-	
L51278-2	421195-180		CVTOTS	FRSHWTRSED	7/27/2010 14:45	8/16/2010 14:30	8/17/2010 9:48		
L51298-1	421240C-300	Freshwater Streams Sediment	CVTOTS	FRSHWTRSED	7/26/2010 10:20	8/16/2010 14:30	8/17/2010 9:44	WG110785-2,-3,-1,-4,-5	
L51298-2	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 11:15	8/16/2010 14:30	8/17/2010 9:44		
L51298-3	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 11:45	8/16/2010 14:30	8/17/2010 9:45		
L51298-4	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 12:05	8/16/2010 14:30	8/17/2010 9:45		
L51298-5	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 12:35	8/16/2010 14:30	8/17/2010 9:46		
L51298-6	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 13:00	8/16/2010 14:30	8/17/2010 9:52		
L51298-7	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 13:20	8/16/2010 14:30	8/17/2010 9:53		
L51298-8	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 13:50	8/16/2010 14:30	8/17/2010 9:53		
L51298-9	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 14:15	8/16/2010 14:30	8/17/2010 9:54		
L51298-10	421240C-300		CVTOTS	FRSHWTRSED	7/26/2010 14:45	8/16/2010 14:30	8/17/2010 9:54		
WG110783-1	MB		CVTOTS	OTHR SOLID		8/16/2010 14:30	8/17/2010 9:36		MB1 8/16/10
WG110785-1	MB		CVTOTS	OTHR SOLID		8/16/2010 14:30	8/17/2010 9:40		MB2 8/16/10
WG110785-2	LD		CVTOTS	FRSHWTRSED		8/16/2010 14:30	8/17/2010 9:47	WG110783-1,WG110785-2,-3,-1,-4,-5	L51278-2
WG110785-3	LT		CVTOTS	FRSHWTRSED		8/16/2010 14:30	8/17/2010 9:47		WG110785-2 L51278-2
WG110785-4	LD		CVTOTS	FRSHWTRSED		8/16/2010 14:30	8/17/2010 9:43	WG110785-2,-3,-1,-4,-5	L51247-3
WG110785-5	LT		CVTOTS	FRSHWTRSED		8/16/2010 14:30	8/17/2010 9:43		WG110785-4 L51247-3

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110756 Total Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	MTHG-MIDS	FRSHWTRSED	7/27/2010 11:35	8/16/2010 10:05	8/17/2010 11:29	WG110756-1,-2,-3,-4,-5,-6,-7	
L51247-2	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 9:20	8/16/2010 10:05	8/17/2010 11:31		
L51247-3	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 13:05	8/16/2010 10:05	8/17/2010 11:36		
L51247-4	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 10:15	8/16/2010 10:05	8/17/2010 11:38		
L51247-5	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 11:00	8/16/2010 10:05	8/17/2010 11:22		
L51247-6	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 9:45	8/16/2010 10:05	8/17/2010 11:40		
L51247-7	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 10:35	8/16/2010 10:05	8/17/2010 11:42		
L51247-8	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 10:05	8/16/2010 10:05	8/17/2010 11:43		
L51247-9	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 11:05	8/16/2010 10:05	8/17/2010 11:45		
L51247-10	421240C-300		MTHG-MIDS	FRSHWTRSED	7/27/2010 12:49	8/16/2010 10:05	8/17/2010 11:47		
L51298-1	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 10:20	8/16/2010 10:05	8/17/2010 11:49		
L51298-2	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 11:15	8/16/2010 10:05	8/17/2010 11:51		
L51298-3	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 11:45	8/16/2010 10:05	8/17/2010 11:52		
L51298-4	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 12:05	8/16/2010 10:05	8/17/2010 11:58		
L51298-5	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 12:35	8/16/2010 10:05	8/17/2010 12:00		
L51298-6	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 13:00	8/16/2010 10:05	8/17/2010 12:01		
L51298-7	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 13:20	8/16/2010 10:05	8/17/2010 12:03		
L51298-8	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 13:50	8/16/2010 10:05	8/17/2010 12:05		
L51298-9	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 14:15	8/16/2010 10:05	8/17/2010 12:07		
L51298-10	421240C-300		MTHG-MIDS	FRSHWTRSED	7/26/2010 14:45	8/16/2010 10:05	8/17/2010 12:09		
WG110756-1	LCS		MTHG-MIDS	FRSHWTRSED		8/16/2010 10:05	8/17/2010 11:14		WQB1
WG110756-2	LCS		MTHG-MIDS	FRSHWTRSED		8/16/2010 10:05	8/17/2010 11:16		WQB1
WG110756-3	MB		MTHG-MIDS	SOLIDBLANK		8/16/2010 10:05	8/17/2010 11:18		METHOD BLANK
WG110756-4	SB		MTHG-MIDS	SOLIDBLANK		8/16/2010 10:05	8/17/2010 11:20		WG110756-3 HG-SMID
WG110756-5	MS		MTHG-MIDS	FRSHWTRSED		8/16/2010 10:05	8/17/2010 11:23		L51247-5 HG-SMID
WG110756-6	MSD		MTHG-MIDS	FRSHWTRSED		8/16/2010 10:05	8/17/2010 11:25		WG110756-5 L51247-5 HG-SMID-MSD
WG110756-7	LD		MTHG-MIDS	FRSHWTRSED		8/16/2010 10:05	8/17/2010 11:27		L51247-5 RPD-SOL

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110587 SEM Mercury

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-7	421240C-300	Freshwater Streams Sediment	MTHG-SEM	FRSHWTRSED	7/26/2010 10:35	8/9/2010 9:55	8/10/2010 10:51	WG110587-1,-2,-6	
L51298-1	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 10:20	8/9/2010 9:55	8/10/2010 10:32	WG110587-1,-2,-3,-4,-5	
L51298-2	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 11:15	8/9/2010 9:55	8/10/2010 10:33		
L51298-3	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 11:45	8/9/2010 9:55	8/10/2010 10:22		
L51298-4	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 12:05	8/9/2010 9:55	8/10/2010 10:35		
L51298-5	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 12:35	8/9/2010 9:55	8/10/2010 10:41		
L51298-6	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 13:00	8/9/2010 9:55	8/10/2010 10:42		
L51298-7	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 13:20	8/9/2010 9:55	8/10/2010 10:44		
L51298-8	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 13:50	8/9/2010 9:55	8/10/2010 10:46		
L51298-9	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 14:15	8/9/2010 9:55	8/10/2010 10:48	WG110587-1,-2,-6	
L51298-10	421240C-300		MTHG-SEM	FRSHWTRSED	7/26/2010 14:45	8/9/2010 9:55	8/10/2010 10:50		
WG110587-1	MB		MTHG-SEM	SOLIDBLANK		8/9/2010 9:55	8/10/2010 10:19	WG110587-1,-2,-3,-4,-5,-6	METHOD BLANK
WG110587-2	SB		MTHG-SEM	SOLIDBLANK		8/9/2010 9:55	8/10/2010 10:21		WG110587-1 HG-SMID
WG110587-3	MS		MTHG-SEM	FRSHWTRSED		8/9/2010 9:55	8/10/2010 10:24	WG110587-1,-2,-3,-4,-5	L51298-3 HG-SMID
WG110587-4	LD		MTHG-SEM	FRSHWTRSED		8/9/2010 9:55	8/10/2010 10:26		L51298-3 RPD-SOL
WG110587-5	MB		MTHG-SEM	SOLIDBLANK		8/9/2010 9:55	8/10/2010 10:28		EXTRACTION BLANK 8/3/10
WG110587-6	MB		MTHG-SEM	SOLIDBLANK		8/9/2010 9:55	8/10/2010 10:30	WG110587-1,-2,-6	EXTRACTION BLANK 8/4/10

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110606 SEM Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-7	421240C-300	Freshwater Streams Sediment	MTICP-SEM	FRSHWTRSED	7/26/2010 10:35	8/10/2010 8:00	8/10/2010 10:15	WG110606-1,-2,-3,-4,-6	
L51298-1	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 10:20	8/10/2010 8:00	8/10/2010 10:21		
L51298-2	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 11:15	8/10/2010 8:00	8/10/2010 10:26		
L51298-3	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 11:45	8/10/2010 8:00	8/10/2010 10:32		
L51298-4	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 12:05	8/10/2010 8:00	8/10/2010 11:01		
L51298-5	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 12:35	8/10/2010 8:00	8/10/2010 11:06		
L51298-6	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 13:00	8/10/2010 8:00	8/10/2010 11:12		
L51298-7	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 13:20	8/10/2010 8:00	8/10/2010 11:18		
L51298-8	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 13:50	8/10/2010 8:00	8/10/2010 11:23		
L51298-9	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 14:15	8/10/2010 8:00	8/10/2010 11:29		
L51298-10	421240C-300		MTICP-SEM	FRSHWTRSED	7/26/2010 14:45	8/10/2010 8:00	8/10/2010 11:35		
WG110606-1	SB		MTICP-SEM	SOLIDBLANK		8/10/2010 8:00	8/10/2010 9:53	WG110606-1,-2,-3,-4,-5,-6	WG110606-2 ICPH METHOD BLANK
WG110606-2	MB		MTICP-SEM	SOLIDBLANK		8/10/2010 8:00	8/10/2010 9:59		
WG110606-3	LD		MTICP-SEM	FRSHWTRSED		8/10/2010 8:00	8/10/2010 10:38	WG110606-1,-2,-3,-4,-5	L51298-3 RPD-SOL
WG110606-4	MS		MTICP-SEM	FRSHWTRSED		8/10/2010 8:00	8/10/2010 10:44		L51298-3 ICPH
WG110606-5	MB		MTICP-SEM	SOLIDBLANK		8/10/2010 8:00	8/10/2010 10:04		EXTRACTION BLANK 080310 (L51298-1-8)
WG110606-6	MB		MTICP-SEM	SOLIDBLANK		8/10/2010 8:00	8/10/2010 10:10		EXTRACTION BLANK 080410 (L51247-7, L51298-9,10)

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG111413 Total Metals

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	MTICPMS-SED	FRSHWTRSED	7/27/2010 11:35	9/28/2010 8:00	9/29/2010 12:16	WG111413-1,-2,-3,-4,-5,-6	
L51247-2	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 9:20	9/28/2010 8:00	9/29/2010 12:21		
L51247-3	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 13:05	9/28/2010 8:00	9/29/2010 12:26		
L51247-4	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 10:15	9/28/2010 8:00	9/29/2010 12:31		
L51247-5	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 11:00	9/28/2010 8:00	9/29/2010 12:36		
L51247-6	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 9:45	9/28/2010 8:00	9/29/2010 12:41		
L51247-7	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 10:35	9/28/2010 8:00	9/29/2010 12:56		
L51247-8	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 10:05	9/28/2010 8:00	9/29/2010 13:11		
L51247-9	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 11:05	9/28/2010 8:00	9/29/2010 13:16		
L51247-10	421240C-300		MTICPMS-SED	FRSHWTRSED	7/27/2010 12:49	9/28/2010 8:00	9/29/2010 13:21		
L51298-1	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 10:20	9/28/2010 8:00	9/29/2010 13:26		
L51298-2	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 11:15	9/28/2010 8:00	9/29/2010 13:31		
L51298-3	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 11:45	9/28/2010 8:00	9/29/2010 13:36		
L51298-4	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 12:05	9/28/2010 8:00	9/29/2010 13:41		
L51298-5	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 12:35	9/28/2010 8:00	9/29/2010 13:56		
L51298-6	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 13:00	9/28/2010 8:00	9/29/2010 14:01		
L51298-7	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 13:20	9/28/2010 8:00	9/29/2010 14:06		
L51298-8	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 13:50	9/28/2010 8:00	9/29/2010 14:11		
L51298-9	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 14:15	9/28/2010 8:00	9/29/2010 14:16		
L51298-10	421240C-300		MTICPMS-SED	FRSHWTRSED	7/26/2010 14:45	9/28/2010 8:00	9/29/2010 14:21		
WG111413-1	MB		MTICPMS-SED	SOLIDBLANK		9/28/2010 8:00	9/29/2010 12:01		METHOD BLANK
WG111413-2	SB		MTICPMS-SED	SOLIDBLANK		9/28/2010 8:00	9/29/2010 12:06		WG111413-1 MS-100
WG111413-3	LCS		MTICPMS-SED	FRSHWTRSED		9/28/2010 8:00	9/29/2010 12:11		BUFFSED
WG111413-4	LCS		MTICPMS-SED	FRSHWTRSED		9/28/2010 8:00	9/29/2010 14:26		ERASOIL
WG111413-5	LD		MTICPMS-SED	FRSHWTRSED		9/28/2010 8:00	9/29/2010 13:01		L51247-7 RPD-SOL
WG111413-6	MS		MTICPMS-SED	FRSHWTRSED		9/28/2010 8:00	9/29/2010 13:06		L51247-7 MS-100

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110469 Semi Volatile Organics

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	ORBNALLFULL	FRSHWTRSED	7/27/2010 11:35	9/23/2010 7:00	10/20/2010 10:38	WG110469-6,-1,-2,-3,-4,-5	
L51247-2	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 9:20	9/23/2010 7:00	10/20/2010 11:16		
L51247-3	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 13:05	9/23/2010 7:00	10/20/2010 11:54		
L51247-4	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 10:15	9/23/2010 7:00	10/20/2010 12:32		
L51247-5	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 11:00	9/23/2010 7:00	10/20/2010 13:10		
L51247-6	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 9:45	9/23/2010 7:00	10/20/2010 13:48		
L51247-7	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 10:35	9/23/2010 7:00	10/20/2010 14:26		
L51247-8	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 10:05	9/23/2010 7:00	10/20/2010 15:04		
L51247-9	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 11:05	9/23/2010 7:00	10/20/2010 15:43		
L51247-10	421240C-300		ORBNALLFULL	FRSHWTRSED	7/27/2010 12:49	9/23/2010 7:00	10/20/2010 16:21		
L51298-1	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 10:20	9/23/2010 7:00	10/21/2010 9:08		
L51298-2	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 11:15	9/23/2010 7:00	10/21/2010 9:46		
L51298-3	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 11:45	9/23/2010 7:00	10/21/2010 10:24		
L51298-4	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 12:05	9/23/2010 7:00	10/21/2010 11:02		
L51298-5	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 12:35	9/23/2010 7:00	10/21/2010 11:40		
L51298-6	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 13:00	9/23/2010 7:00	10/21/2010 12:18		
L51298-7	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 13:20	9/23/2010 7:00	10/21/2010 12:56		
L51298-8	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 13:50	9/23/2010 7:00	10/21/2010 13:34		
L51298-9	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 14:15	9/23/2010 7:00	10/15/2010 16:54		
L51298-10	421240C-300		ORBNALLFULL	FRSHWTRSED	7/26/2010 14:45	9/23/2010 7:00	10/15/2010 17:32		
WG110469-1	MB		ORBNALLFULL	OTHR SOLID		9/23/2010 7:00	10/15/2010 8:09		MB100803
WG110469-2	SB		ORBNALLFULL	OTHR SOLID		9/23/2010 7:00	10/15/2010 8:47		WG110469-1
WG110469-3	MS		ORBNALLFULL	FRSHWTRSED		9/23/2010 7:00	10/15/2010 14:23		L51298-9
WG110469-4	MSD		ORBNALLFULL	FRSHWTRSED		9/23/2010 7:00	10/15/2010 15:01		WG110469-3 L51298-9
WG110469-5	SRM		ORBNALLFULL	FRSHWTRSED		9/23/2010 7:00	10/15/2010 15:38	WG110469-5	1944
WG110469-6	LD		ORBNALLFULL	FRSHWTRSED		9/23/2010 7:00	10/15/2010 16:16	WG110469-6,-1,-2,-3,-4,-5	L51298-10

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110470 EDC Compounds

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	OREDC	FRSHWTRSED	7/27/2010 11:35	9/23/2010 7:00	10/20/2010 10:38	WG110470-6,-1,-2,-3,-4	
L51247-2	421240C-300		OREDC	FRSHWTRSED	7/27/2010 9:20	9/23/2010 7:00	10/20/2010 11:16		
L51247-3	421240C-300		OREDC	FRSHWTRSED	7/27/2010 13:05	9/23/2010 7:00	10/20/2010 11:54		
L51247-4	421240C-300		OREDC	FRSHWTRSED	7/27/2010 10:15	9/23/2010 7:00	10/20/2010 12:32		
L51247-5	421240C-300		OREDC	FRSHWTRSED	7/27/2010 11:00	9/23/2010 7:00	10/20/2010 13:10		
L51247-6	421240C-300		OREDC	FRSHWTRSED	7/26/2010 9:45	9/23/2010 7:00	10/20/2010 13:48		
L51247-7	421240C-300		OREDC	FRSHWTRSED	7/26/2010 10:35	9/23/2010 7:00	10/20/2010 14:26		
L51247-8	421240C-300		OREDC	FRSHWTRSED	7/27/2010 10:05	9/23/2010 7:00	10/20/2010 15:04		
L51247-9	421240C-300		OREDC	FRSHWTRSED	7/27/2010 11:05	9/23/2010 7:00	10/20/2010 15:43		
L51247-10	421240C-300		OREDC	FRSHWTRSED	7/27/2010 12:49	9/23/2010 7:00	10/20/2010 16:21		
L51298-1	421240C-300		OREDC	FRSHWTRSED	7/26/2010 10:20	9/23/2010 7:00	10/21/2010 9:08		
L51298-2	421240C-300		OREDC	FRSHWTRSED	7/26/2010 11:15	9/23/2010 7:00	10/21/2010 9:46		
L51298-3	421240C-300		OREDC	FRSHWTRSED	7/26/2010 11:45	9/23/2010 7:00	10/21/2010 10:24		
L51298-4	421240C-300		OREDC	FRSHWTRSED	7/26/2010 12:05	9/23/2010 7:00	10/21/2010 11:02		
L51298-5	421240C-300		OREDC	FRSHWTRSED	7/26/2010 12:35	9/23/2010 7:00	10/21/2010 11:40		
L51298-6	421240C-300		OREDC	FRSHWTRSED	7/26/2010 13:00	9/23/2010 7:00	10/21/2010 12:18		
L51298-7	421240C-300		OREDC	FRSHWTRSED	7/26/2010 13:20	9/23/2010 7:00	10/21/2010 12:56		
L51298-8	421240C-300		OREDC	FRSHWTRSED	7/26/2010 13:50	9/23/2010 7:00	10/21/2010 13:34		
L51298-9	421240C-300		OREDC	FRSHWTRSED	7/26/2010 14:15	9/23/2010 7:00	10/15/2010 16:54		
L51298-10	421240C-300		OREDC	FRSHWTRSED	7/26/2010 14:45	9/23/2010 7:00	10/15/2010 17:32		
WG110470-1	MB		OREDC	OTHR SOLID		9/23/2010 7:00	10/15/2010 8:09		MB100803
WG110470-2	SB		OREDC	OTHR SOLID		9/23/2010 7:00	10/15/2010 8:47		WG110470-1
WG110470-3	MS		OREDC	FRSHWTRSED		9/23/2010 7:00	10/15/2010 14:23		L51298-9
WG110470-4	MSD		OREDC	FRSHWTRSED		9/23/2010 7:00	10/15/2010 15:01		WG110470-3 L51298-9
WG110470-6	LD		OREDC	FRSHWTRSED		9/23/2010 7:00	10/15/2010 16:16		L51298-10

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG111561 EDC Compounds

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	OREDC-LVI	FRSHWTRSED	7/27/2010 11:35	9/29/2010 7:00	10/18/2010 12:05	WG111561-1,-2,-3,-4,-5	
L51247-2	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 9:20	9/29/2010 7:00	10/18/2010 12:35		
L51247-3	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 13:05	9/29/2010 7:00	10/18/2010 13:06		
L51247-4	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 10:15	9/29/2010 7:00	10/18/2010 13:36		
L51247-5	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 11:00	9/29/2010 7:00	10/18/2010 14:06		
L51247-6	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 9:45	9/29/2010 7:00	10/18/2010 14:36		
L51247-7	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 10:35	9/29/2010 7:00	10/18/2010 15:06		
L51247-8	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 10:05	9/29/2010 7:00	10/19/2010 8:06		
L51247-9	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 11:05	9/29/2010 7:00	10/19/2010 8:36		
L51247-10	421240C-300		OREDC-LVI	FRSHWTRSED	7/27/2010 12:49	9/29/2010 7:00	10/19/2010 9:06		
L51298-1	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 10:20	9/29/2010 7:00	10/19/2010 9:36		
L51298-2	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 11:15	9/29/2010 7:00	10/19/2010 10:06		
L51298-3	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 11:45	9/29/2010 7:00	10/19/2010 10:36		
L51298-4	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 12:05	9/29/2010 7:00	10/19/2010 11:06		
L51298-5	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 12:35	9/29/2010 7:00	10/19/2010 11:37		
L51298-6	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 13:00	9/29/2010 7:00	10/19/2010 12:07		
L51298-7	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 13:20	9/29/2010 7:00	10/19/2010 12:37		
L51298-8	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 13:50	9/29/2010 7:00	10/19/2010 13:07		
L51298-9	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 14:15	9/29/2010 7:00	10/19/2010 13:37		
L51298-10	421240C-300		OREDC-LVI	FRSHWTRSED	7/26/2010 14:45	9/29/2010 7:00	10/19/2010 14:07		
WG111561-1	MB		OREDC-LVI	OTHR SOLID		9/29/2010 7:00	10/18/2010 9:05		MB100929
WG111561-2	SB		OREDC-LVI	OTHR SOLID		9/29/2010 7:00	10/18/2010 9:35		WG111561-1
WG111561-3	MS		OREDC-LVI	FRSHWTRSED		9/29/2010 7:00	10/18/2010 10:05		L51298-2
WG111561-4	MSD		OREDC-LVI	FRSHWTRSED		9/29/2010 7:00	10/18/2010 10:35		WG111561-3 L51298-2
WG111561-5	LD		OREDC-LVI	FRSHWTRSED		9/29/2010 7:00	10/18/2010 11:35		L51298-9

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110374 PBDE

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	ORPBDE	FRSHWTRSED	7/27/2010 11:35	7/28/2010 7:00	8/30/2010 14:16	WG110374-1,-2,-3,-4,-5,-6	
L51247-2	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 9:20	7/28/2010 7:00	8/30/2010 14:36		
L51247-3	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 13:05	7/28/2010 7:00	8/30/2010 14:57		
L51247-4	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 10:15	7/28/2010 7:00	8/30/2010 15:17		
L51247-5	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 11:00	7/28/2010 7:00	8/30/2010 15:38		
L51247-6	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 9:45	7/28/2010 7:00	8/30/2010 15:58		
L51247-7	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 10:35	7/28/2010 7:00	8/30/2010 16:19		
L51247-8	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 10:05	7/28/2010 7:00	8/30/2010 16:39		
L51247-9	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 11:05	7/28/2010 7:00	8/30/2010 17:15		
L51247-10	421240C-300		ORPBDE	FRSHWTRSED	7/27/2010 12:49	7/28/2010 7:00	8/30/2010 17:20		
L51298-1	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 10:20	7/28/2010 7:00	8/30/2010 17:41		
L51298-2	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 11:15	7/28/2010 7:00	8/30/2010 18:01		
L51298-3	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 11:45	7/28/2010 7:00	8/30/2010 18:22		
L51298-4	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 12:05	7/28/2010 7:00	8/30/2010 18:42		
L51298-5	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 12:35	7/28/2010 7:00	8/30/2010 19:03		
L51298-6	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 13:00	7/28/2010 7:00	8/30/2010 19:23		
L51298-7	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 13:20	7/28/2010 7:00	8/30/2010 19:44		
L51298-8	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 13:50	7/28/2010 7:00	8/30/2010 20:04		
L51298-9	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 14:15	7/28/2010 7:00	8/30/2010 20:25		
L51298-10	421240C-300		ORPBDE	FRSHWTRSED	7/26/2010 14:45	7/28/2010 7:00	8/30/2010 20:45		
WG110374-1	MB		ORPBDE	OTHR SOLID		7/28/2010 7:00	8/30/2010 12:13		MB100728
WG110374-2	SB		ORPBDE	OTHR SOLID		7/28/2010 7:00	8/30/2010 12:33		WG110374-1
WG110374-3	MS		ORPBDE	FRSHWTRSED		7/28/2010 7:00	8/30/2010 12:54		L51298-2
WG110374-4	MSD		ORPBDE	FRSHWTRSED		7/28/2010 7:00	8/30/2010 13:14		WG110374-3 L51298-2
WG110374-5	LCS		ORPBDE	OTHR SOLID		7/28/2010 7:00	8/30/2010 13:35		2585
WG110374-6	LD		ORPBDE	FRSHWTRSED		7/28/2010 7:00	8/30/2010 13:55	WG110374-6	L51298-10

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110373 PCB

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	ORPCBLL	FRSHWTRSED	7/27/2010 11:35	7/28/2010 7:00	9/3/2010 18:51	WG110373-6,-5,-4,-3,-2,-1	
L51247-2	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 9:20	7/28/2010 7:00	9/3/2010 19:28		
L51247-3	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 13:05	7/28/2010 7:00	9/3/2010 21:19		
L51247-4	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 10:15	7/28/2010 7:00	9/3/2010 21:57		
L51247-5	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 11:00	7/28/2010 7:00	9/3/2010 22:34		
L51247-6	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 9:45	7/28/2010 7:00	9/3/2010 23:11		
L51247-7	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 10:35	7/28/2010 7:00	9/3/2010 23:48		
L51247-8	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 10:05	7/28/2010 7:00	9/4/2010 0:25		
L51247-9	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 11:05	7/28/2010 7:00	9/4/2010 1:02		
L51247-10	421240C-300		ORPCBLL	FRSHWTRSED	7/27/2010 12:49	7/28/2010 7:00	9/4/2010 1:39		
L51298-1	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 10:20	7/28/2010 7:00	9/3/2010 16:23		
L51298-2	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 11:15	7/28/2010 7:00	9/4/2010 2:16		
L51298-3	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 11:45	7/28/2010 7:00	9/4/2010 2:53		
L51298-4	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 12:05	7/28/2010 7:00	9/4/2010 4:45		
L51298-5	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 12:35	7/28/2010 7:00	9/4/2010 5:22		
L51298-6	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 13:00	7/28/2010 7:00	9/4/2010 5:59		
L51298-7	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 13:20	7/28/2010 7:00	9/4/2010 6:36		
L51298-8	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 13:50	7/28/2010 7:00	9/4/2010 7:13		
L51298-9	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 14:15	7/28/2010 7:00	9/3/2010 17:37		
L51298-10	421240C-300		ORPCBLL	FRSHWTRSED	7/26/2010 14:45	7/28/2010 7:00	9/4/2010 7:50		
WG110373-1	MB		ORPCBLL	OTHR SOLID		7/28/2010 7:00	9/3/2010 13:54		MB100728
WG110373-2	SB		ORPCBLL	OTHR SOLID		7/28/2010 7:00	9/3/2010 14:31		WG110373-1
WG110373-3	MS		ORPCBLL	FRSHWTRSED		7/28/2010 7:00	9/3/2010 15:09		L51298-1
WG110373-4	MSD		ORPCBLL	FRSHWTRSED		7/28/2010 7:00	9/3/2010 15:46		WG110373-3 L51298-1
WG110373-5	SRM		ORPCBLL	OTHR SOLID		7/28/2010 7:00	9/3/2010 18:14		HS2
WG110373-6	LD		ORPCBLL	FRSHWTRSED		7/28/2010 7:00	9/3/2010 17:00		L51298-9

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110372 Pesticides

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	ORPESTLL	FRSHWTRSED	7/27/2010 11:35	7/28/2010 7:00	8/24/2010 16:59	WG110372-6,-4,-2,-1,-5,-3	
L51247-2	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 9:20	7/28/2010 7:00	8/24/2010 17:37		
L51247-3	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 13:05	7/28/2010 7:00	8/24/2010 20:05		
L51247-4	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 10:15	7/28/2010 7:00	8/24/2010 20:42		
L51247-5	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 11:00	7/28/2010 7:00	8/24/2010 21:20		
L51247-6	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 9:45	7/28/2010 7:00	8/24/2010 21:57		
L51247-7	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 10:35	7/28/2010 7:00	8/24/2010 14:31		
L51247-8	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 10:05	7/28/2010 7:00	8/24/2010 23:11		
L51247-9	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 11:05	7/28/2010 7:00	8/24/2010 23:11		
L51247-10	421240C-300		ORPESTLL	FRSHWTRSED	7/27/2010 12:49	7/28/2010 7:00	8/24/2010 23:48		
L51298-1	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 10:20	7/28/2010 7:00	8/25/2010 0:25		
L51298-2	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 11:15	7/28/2010 7:00	8/25/2010 1:02		
L51298-3	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 11:45	7/28/2010 7:00	8/25/2010 1:39		
L51298-4	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 12:05	7/28/2010 7:00	8/25/2010 4:08		
L51298-5	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 12:35	7/28/2010 7:00	8/25/2010 4:45		
L51298-6	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 13:00	7/28/2010 7:00	8/25/2010 5:22		
L51298-7	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 13:20	7/28/2010 7:00	8/25/2010 5:59		
L51298-8	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 13:50	7/28/2010 7:00	8/25/2010 6:37		
L51298-9	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 14:15	7/28/2010 7:00	8/24/2010 15:45		
L51298-10	421240C-300		ORPESTLL	FRSHWTRSED	7/26/2010 14:45	7/28/2010 7:00	8/25/2010 7:14		
WG110372-1	MB		ORPESTLL	OTHR SOLID		7/28/2010 7:00	8/24/2010 12:02		MB100728
WG110372-2	SB		ORPESTLL	OTHR SOLID		7/28/2010 7:00	8/24/2010 12:39		WG110372-1
WG110372-3	MS		ORPESTLL	FRSHWTRSED		7/28/2010 7:00	8/24/2010 13:16	WG110372-5,-3	L51247-7
WG110372-4	MSD		ORPESTLL	FRSHWTRSED		7/28/2010 7:00	8/24/2010 13:54	WG110372-6,-4,-2,-1,-5,-3	WG110372-3 L51247-7
WG110372-5	SRM		ORPESTLL	OTHR SOLID		7/28/2010 7:00	8/24/2010 16:22	WG110372-5,-3	1944
WG110372-6	LD		ORPESTLL	FRSHWTRSED		7/28/2010 7:00	8/24/2010 15:08	WG110372-6,-4,-2,-1,-5,-3	L51298-9

King County Environmental Laboratory Batch Report

Streams Sediment, 2010, L51247, L51298

WG110421 WTPH-Dx

Sample	Project	Project Description	List Type	Matrix	Collect Date	Prep Date	Anal Date	QC Association	Comments
L51247-1	421240C-300	Freshwater Streams Sediment	ORWTPH-DX	FRSHWTRSED	7/27/2010 11:35	7/30/2010 6:00	8/24/2010 18:51	WG110421-5,-4,-3,-2,-1	
L51247-2	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 9:20	7/30/2010 6:00	8/24/2010 19:36		
L51247-3	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 13:05	7/30/2010 6:00	8/24/2010 20:21		
L51247-4	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 10:15	7/30/2010 6:00	8/24/2010 23:21		
L51247-5	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 11:00	7/30/2010 6:00	8/25/2010 0:05		
L51247-6	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 9:45	7/30/2010 6:00	8/25/2010 0:50		
L51247-7	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 10:35	7/30/2010 6:00	8/25/2010 1:35		
L51247-8	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 10:05	7/30/2010 6:00	8/25/2010 2:20		
L51247-9	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 11:05	7/30/2010 6:00	8/24/2010 16:36		
L51247-10	421240C-300		ORWTPH-DX	FRSHWTRSED	7/27/2010 12:49	7/30/2010 6:00	8/25/2010 3:04		
L51298-1	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 10:20	7/30/2010 6:00	8/25/2010 3:49		
L51298-2	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 11:15	7/30/2010 6:00	8/25/2010 4:34		
L51298-3	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 11:45	7/30/2010 6:00	8/25/2010 8:18		
L51298-4	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 12:05	7/30/2010 6:00	8/25/2010 9:03		
L51298-5	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 12:35	7/30/2010 6:00	8/25/2010 9:48		
L51298-6	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 13:00	7/30/2010 6:00	8/25/2010 10:33		
L51298-7	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 13:20	7/30/2010 6:00	8/25/2010 11:18		
L51298-8	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 13:50	7/30/2010 6:00	8/25/2010 12:03		
L51298-9	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 14:15	7/30/2010 6:00	8/25/2010 12:48		
L51298-10	421240C-300		ORWTPH-DX	FRSHWTRSED	7/26/2010 14:45	7/30/2010 6:00	8/25/2010 13:33		
WG110421-1	MB		ORWTPH-DX	OTHR SOLID		7/30/2010 6:00	8/24/2010 14:22		MB100730
WG110421-2	SB		ORWTPH-DX	OTHR SOLID		7/30/2010 6:00	8/24/2010 15:07		WG110421-1 SB-MO
WG110421-3	SB		ORWTPH-DX	OTHR SOLID		7/30/2010 6:00	8/24/2010 15:51		WG110421-1 SB-DSL
WG110421-4	LD		ORWTPH-DX	FRSHWTRSED		7/30/2010 6:00	8/24/2010 17:21		L51247-7
WG110421-5	LD		ORWTPH-DX	FRSHWTRSED		7/30/2010 6:00	8/24/2010 18:06		L51298-1

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110545 AVS

MB:WG110545-1 Matrix: OTHR SOLID Listtype:CVAVS Method:EPA DEC 1991 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG110545-2 MB:WG110545-1 Matrix: OTHR SOLID Listtype:CVAVS Method:EPA DEC 1991 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	25.8	25.5	99		80--120

LT:WG110545-4 LD:WG110545-3 L51298-3 Matrix: FRSHWTRSED Listtype:CVAVS Method:EPA DEC 1991 Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Sulfide, Acid Volatile	0.24	0.961	mg/Kg	<MDL	<MDL	<MDL			0--20

MS:WG110545-5 L51298-3 Matrix: FRSHWTRSED Listtype:CVAVS Method:EPA DEC 1991 Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	0.24	0.976	mg/Kg	<MDL	24.2	2.32	10	*	65--135

MB:WG110545-6 Matrix: OTHR SOLID Listtype:CVAVS Method:EPA DEC 1991 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	

SB:WG110545-7 MB:WG110545-6 Matrix: OTHR SOLID Listtype:CVAVS Method:EPA DEC 1991 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Sulfide, Acid Volatile	0.25	1	mg/Kg	<MDL	25.5	26	102		80--120

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110446 Ammonia

MB:WG110446-1 Matrix: OTHR SOLID Listtype:CVNH3-KCL Method:SM4500-NH3-G KCL Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Ammonia Nitrogen	0.1	0.2	mg/Kg	<MDL	

SB:WG110446-2 MB:WG110446-1 Matrix: OTHR SOLID Listtype:CVNH3-KCL Method:SM4500-NH3-G KCL Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.1	0.2	mg/Kg	<MDL	1	1.21	121	*	80--120

LCS:WG110446-3 Matrix: OTHR SOLID Listtype:CVNH3-KCL Method:SM4500-NH3-G KCL Project: Pkey:STD
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.1	0.2	mg/Kg	1	1.09	109		80--120

LT:WG110446-5 LD:WG110446-4 L51247-7 Matrix: FRSHWTRSED Listtype:CVNH3-KCL Method:SM4500-NH3-G KCL Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Ammonia Nitrogen	0.099	0.198	mg/Kg	1.98	1.98	2	1		0--20

MS:WG110446-6 L51247-7 Matrix: FRSHWTRSED Listtype:CVNH3-KCL Method:SM4500-NH3-G KCL Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Ammonia Nitrogen	0.096	0.192	mg/Kg	1.98	1	3.01	109		75--125

King County Environmental Laboratory Analytical QC Report

Workgroup: WG111574 Orthophosphate Phosphorus

MB:WG111574-1 Matrix: OTHR SOLID Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	

SB:WG111574-2 MB:WG111574-1 Matrix: OTHR SOLID Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	8	7.75	97		80--120

LCS:WG111574-3 Matrix: OTHR SOLID Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project: Pkey:STD
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	16	17.3	108		80--120

LT:WG111574-5 LD:WG111574-4 L51247-4 Matrix: FRSHWTRSED Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Orthophosphate Phosphorus	0.99	2.46	mg/Kg	13.1	12.1	12.2	4		0--20

MS:WG111574-6 L51247-4 Matrix: FRSHWTRSED Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.49	mg/Kg	13.1	8	18.7	70		70--130

MB:WG111574-7 Matrix: OTHR SOLID Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Orthophosphate Phosphorus	1	2.5	mg/Kg	<MDL	

LCS:WG111574-8 Matrix: OTHR SOLID Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project: Pkey:STD
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	1	2.5	mg/Kg	16	15.7	98		80--120

King County Environmental Laboratory Analytical QC Report

LT:WG111574-10 LD:WG111574-9 L51549-20 Matrix: FRSHWTRSED Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project:421235 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Orthophosphate Phosphorus	0.99	2.48	mg/Kg	2.4	3.31	2.3	21	*	0--20

MS:WG111574-11 L51549-20 Matrix: FRSHWTRSED Listtype:CVORTHOP-OL Method:SM4500-P-F OL Project:421235 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Orthophosphate Phosphorus	0.96	2.39	mg/Kg	2.4	8	10.1	98		70--130

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110361 pH

CS:WG110361-1 Matrix: BLANK WTR Listtype:CVPH Method:SM4500-H-B Project: Pkey:STD
(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.94	101		98--102

LT:WG110361-3 LD:WG110361-2 L51298-10 Matrix: FRSHWTRSED Listtype:CVPH Method:SW846 9045C Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
pH			pH	6.94	7.03	6.98	1		0--5

CS:WG110361-4 Matrix: BLANK WTR Listtype:CVPH Method:SM4500-H-B Project: Pkey:STD
(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	9.18	9.2	100		99--101

CS:WG110361-5 Matrix: BLANK WTR Listtype:CVPH Method:SM4500-H-B Project: Pkey:STD
(Check Standard)

Parameter	MDL	RDL	Units	True Value	CS Value	% Rec.	Qual	Lab Limit
pH			pH	6.86	6.96	101		98--102

King County Environmental Laboratory Analytical QC Report

Workgroup: WG111141 PSD

LT:WG111141-4 LD:WG111141-3 L51247-2 Matrix: FRSHWTRSED Listtype:CVPSD Method:ASTM D422 Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Gravel	0.33	3.35	%	4.3	6.1	5.3	17		0--20
Sand	0.33	3.35	%	55.4	60.8	65.1	8		0--20
Silt	1.7	3.35	%	31.6	30.1	28.4	5		0--20
Clay	1.7	3.35	%	3.5	3.3	3.2	5		0--20

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110748 TOC

MB:WG110748-1 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SRM:WG110748-2 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	2600	5120	mg/Kg	33510	33800	101		80--120

MB:WG110748-3 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

MB:WG110748-4 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Organic Carbon	500	1000	mg/Kg	<MDL	

SB:WG110748-5 MB:WG110748-4 Matrix: OTHR SOLID Listtype:CVTOC Method:SW846 9060-PSEP96 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	500	1000	mg/Kg	<MDL	2500	2720	109		80--120

LT:WG110748-7 LD:WG110748-6 L51298-9 Matrix: FRSHWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Organic Carbon	710	1420	mg/Kg	5380	5050	4930	5		0--20

MS:WG110748-8 L51298-9 Matrix: FRSHWTRSED Listtype:CVTOC Method:SW846 9060-PSEP96 Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Total Organic Carbon	710	1430	mg/Kg	5380	3568	9010	102		75--125

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110785 Total Solids

MB:WG110785-1 Matrix: OTHR SOLID Listtype:CVTOTS Method:SM2540-G Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total Solids	0.005	0.01	%	<MDL	

LT:WG110785-3 LD:WG110785-2 L51278-2 Matrix: FRSHWTRSED Listtype:CVTOTS Method:SM2540-G Project:421195-180 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Solids	0.005	0.01	%	77.9	78.1	79.2	1		0--20

LT:WG110785-5 LD:WG110785-4 L51247-3 Matrix: FRSHWTRSED Listtype:CVTOTS Method:SM2540-G Project:421240C-300 Pkey:SED
(Lab Triplicate, Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	LT Value	RSD	Qual	Lab Limit
Total Solids	0.005	0.01	%	48.4	47.7	47.8	1		0--20

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110756 Total Mercury

LCS:WG110756-1 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.026	0.255	mg/Kg	1.09	1.06	97		80--120

LCS:WG110756-2 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:SED
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.026	0.255	mg/Kg	1.09	1.05	96		80--120

MB:WG110756-3 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Total, CVAA	0.0048	0.0476	mg/Kg	<MDL	

SB:WG110756-4 MB:WG110756-3 Matrix: SOLIDBLANK Listtype:MTHG-MIDS Method:SW846 7471B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Total, CVAA	0.0048	0.0476	mg/Kg	<MDL	0.0952	0.0975	102		85--115

MSD:WG110756-6 MS:WG110756-5 L51247-5 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Mercury, Total, CVAA	0.005	0.0496	mg/Kg	0.014	0.0992	0.113	100		75--125	0.099	0.115	102		2		0--20

LD:WG110756-7 L51247-5 Matrix: FRSHWTRSED Listtype:MTHG-MIDS Method:SW846 7471B Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Mercury, Total, CVAA	0.005	0.0496	mg/Kg	0.014	0.015			0--20

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110587 SEM Mercury

MB:WG110587-1 Matrix: SOLIDBLANK Listtype:MTHG-SEM Method:EPA 245.1*SW846 7470A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

SB:WG110587-2 MB:WG110587-1 Matrix: SOLIDBLANK Listtype:MTHG-SEM Method:EPA 245.1*SW846 7470A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	0.02	0.0183	92		85--115

MS:WG110587-3 L51298-3 Matrix: FRSHWTRSED Listtype:MTHG-SEM Method:EPA 245.1*SW846 7470A Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Mercury, Extractable, SEM	0.00098	0.00293	mg/Kg	0.0015	0.0195	0.0193	91		75--125

LD:WG110587-4 L51298-3 Matrix: FRSHWTRSED Listtype:MTHG-SEM Method:EPA 245.1*SW846 7470A Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Mercury, Extractable, SEM	0.00098	0.00293	mg/Kg	0.0015	0.0015			0--20

MB:WG110587-5 Matrix: SOLIDBLANK Listtype:MTHG-SEM Method:EPA 245.1*SW846 7470A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

MB:WG110587-6 Matrix: SOLIDBLANK Listtype:MTHG-SEM Method:EPA 245.1*SW846 7470A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Mercury, Extractable, SEM	0.001	0.003	mg/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110606 SEM Metals

SB:WG110606-1 MB:WG110606-2 Matrix: SOLIDBLANK Listtype:MTICP-SEM Method:EPA 200.7 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	19.5	98		85--115
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	20	19.6	98		85--115
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	20	19.1	95		85--115
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	20	19.5	98		85--115
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	20	19.8	99		85--115
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.8	94		85--115
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	20	18.9	95		85--115
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	20	18.9	94		85--115

MB:WG110606-2 Matrix: SOLIDBLANK Listtype:MTICP-SEM Method:EPA 200.7 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

LD:WG110606-3 L51298-3 Matrix: FRSHWTRSED Listtype:MTICP-SEM Method:EPA 200.7 Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Silver, Extractable, SEM	0.078	0.391	mg/Kg	0.088	0.079			0--20
Arsenic, Extractable, SEM	0.49	2.44	mg/Kg	3.02	3.14	4		0--20
Cadmium, Extractable, SEM	0.039	0.195	mg/Kg	0.076	0.071			0--20
Chromium, Extractable, SEM	0.059	0.293	mg/Kg	0.311	0.3	3		0--20
Copper, Extractable, SEM	0.078	0.391	mg/Kg	2.09	2.07	1		0--20
Nickel, Extractable, SEM	0.098	0.488	mg/Kg	0.843	0.819	3		0--20
Lead, Extractable, SEM	0.39	1.95	mg/Kg	4.13	4.29	4		0--20
Zinc, Extractable, SEM	0.098	0.488	mg/Kg	13.5	13.5	0		0--20

King County Environmental Laboratory Analytical QC Report

MS:WG110606-4 L51298-3 Matrix: FRSHWTRSED Listtype:MTICP-SEM Method:EPA 200.7 Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Silver, Extractable, SEM	0.078	0.391	mg/Kg	0.088	19.5	19.3	98		75--125
Arsenic, Extractable, SEM	0.49	2.44	mg/Kg	3.02	19.5	19.9	87		75--125
Cadmium, Extractable, SEM	0.039	0.195	mg/Kg	0.076	19.5	16.6	85		75--125
Chromium, Extractable, SEM	0.059	0.293	mg/Kg	0.311	19.5	19.2	97		75--125
Copper, Extractable, SEM	0.078	0.391	mg/Kg	2.09	19.5	19.3	88		75--125
Nickel, Extractable, SEM	0.098	0.488	mg/Kg	0.843	19.5	19.2	94		75--125
Lead, Extractable, SEM	0.39	1.95	mg/Kg	4.13	19.5	22.4	94		75--125
Zinc, Extractable, SEM	0.098	0.488	mg/Kg	13.5	19.5	29.4	82		75--125

MB:WG110606-5 Matrix: SOLIDBLANK Listtype:MTICP-SEM Method:EPA 200.7 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

MB:WG110606-6 Matrix: SOLIDBLANK Listtype:MTICP-SEM Method:EPA 200.7 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Silver, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Arsenic, Extractable, SEM	0.5	2.5	mg/Kg	<MDL	
Cadmium, Extractable, SEM	0.04	0.2	mg/Kg	<MDL	
Chromium, Extractable, SEM	0.06	0.3	mg/Kg	<MDL	
Copper, Extractable, SEM	0.08	0.4	mg/Kg	<MDL	
Nickel, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	
Lead, Extractable, SEM	0.4	2	mg/Kg	<MDL	
Zinc, Extractable, SEM	0.1	0.5	mg/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

Workgroup: WG111413 Total Metals

MB:WG111413-1 Matrix: SOLIDBLANK Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Phosphorus, Total, ICP-MS	12	61	mg/Kg	<MDL	
Chromium, Total, ICP-MS	0.024	0.122	mg/Kg	<MDL	
Nickel, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	
Copper, Total, ICP-MS	0.049	0.244	mg/Kg	<MDL	
Zinc, Total, ICP-MS	0.061	0.305	mg/Kg	0.072	B
Arsenic, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	
Silver, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	
Cadmium, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	
Lead, Total, ICP-MS	0.012	0.061	mg/Kg	0.03	B

SB:WG111413-2 MB:WG111413-1 Matrix: SOLIDBLANK Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Phosphorus, Total, ICP-MS	12	61	mg/Kg	<MDL	610	594	97		85--115
Chromium, Total, ICP-MS	0.024	0.122	mg/Kg	<MDL	2.44	2.31	95		85--115
Nickel, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	2.44	2.47	101		85--115
Copper, Total, ICP-MS	0.049	0.244	mg/Kg	<MDL	2.44	2.46	101		85--115
Zinc, Total, ICP-MS	0.061	0.305	mg/Kg	0.072	2.44	2.68	107		85--115
Arsenic, Total, ICP-MS	0.012	0.061	mg/Kg	<MDL	2.44	2.36	97		85--115
Silver, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	2.44	2.4	98		85--115
Cadmium, Total, ICP-MS	0.0061	0.0305	mg/Kg	<MDL	2.44	2.34	96		85--115
Lead, Total, ICP-MS	0.012	0.061	mg/Kg	0.03	2.44	2.42	98		85--115

LCS:WG111413-3 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:SED
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Chromium, Total, ICP-MS	0.18	0.916	mg/Kg	121.9	62.7	51		40--80
Nickel, Total, ICP-MS	0.092	0.458	mg/Kg	42.9	34.6	81		80--120
Zinc, Total, ICP-MS	0.46	2.29	mg/Kg	408	369	91		69--109
Arsenic, Total, ICP-MS	0.092	0.458	mg/Kg	17	14.7	86		80--120
Cadmium, Total, ICP-MS	0.046	0.229	mg/Kg	2.94	2.86	97		76--116
Lead, Total, ICP-MS	0.092	0.458	mg/Kg	150	157	105		71--111

King County Environmental Laboratory Analytical QC Report

LCS:WG111413-4 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project: Pkey:SED
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit
Chromium, Total, ICP-MS	0.2	1.01	mg/Kg	105	96.9	92		80--120
Nickel, Total, ICP-MS	0.1	0.506	mg/Kg	130	126	97		80--120
Copper, Total, ICP-MS	0.4	2.02	mg/Kg	110	102	93		80--120
Zinc, Total, ICP-MS	0.51	2.53	mg/Kg	223	230	103		80--121
Arsenic, Total, ICP-MS	0.1	0.506	mg/Kg	138	143	104		80--120
Silver, Total, ICP-MS	0.051	0.253	mg/Kg	45.1	47.7	106		66--134
Cadmium, Total, ICP-MS	0.051	0.253	mg/Kg	71	70.1	99		80--120
Lead, Total, ICP-MS	0.1	0.506	mg/Kg	144	158	110		80--120

LD:WG111413-5 L51247-7 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Phosphorus, Total, ICP-MS	13	64	mg/Kg	284	276	3		0--20
Chromium, Total, ICP-MS	0.051	0.256	mg/Kg	16.1	19.6	20		0--20
Nickel, Total, ICP-MS	0.026	0.128	mg/Kg	20.5	24.8	19		0--20
Copper, Total, ICP-MS	0.1	0.512	mg/Kg	7.28	7.87	8		0--20
Zinc, Total, ICP-MS	0.064	0.32	mg/Kg	26.7	26	3		0--20
Arsenic, Total, ICP-MS	0.013	0.064	mg/Kg	2.59	2.89	11		0--20
Silver, Total, ICP-MS	0.0064	0.032	mg/Kg	0.02	0.019			0--20
Cadmium, Total, ICP-MS	0.0064	0.032	mg/Kg	0.0428	0.0427	0		0--20
Lead, Total, ICP-MS	0.013	0.064	mg/Kg	2.14	2.13	1		0--20

MS:WG111413-6 L51247-7 Matrix: FRSHWTRSED Listtype:MTICPMS-SED Method:SW846 3050B*SW846 6020A Project:421240C-300 Pkey:SED
(Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit
Phosphorus, Total, ICP-MS	13	64	mg/Kg	284	634	848	89		75--125
Chromium, Total, ICP-MS	0.051	0.256	mg/Kg	16.1	2.54	19.7		4xRule	75--125
Nickel, Total, ICP-MS	0.026	0.128	mg/Kg	20.5	2.54	22.7		4xRule	75--125
Copper, Total, ICP-MS	0.1	0.512	mg/Kg	7.28	2.54	9.4	84		75--125
Zinc, Total, ICP-MS	0.064	0.32	mg/Kg	26.7	2.54	27.5		4xRule	75--125
Arsenic, Total, ICP-MS	0.013	0.064	mg/Kg	2.59	2.54	4.84	89		75--125
Silver, Total, ICP-MS	0.0064	0.032	mg/Kg	0.02	2.54	2.35	92		75--125
Cadmium, Total, ICP-MS	0.0064	0.032	mg/Kg	0.0428	2.54	2.43	94		75--125
Lead, Total, ICP-MS	0.013	0.064	mg/Kg	2.14	2.54	5.3	125		75--125

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110469 Semi Volatile Organics

MB:WG110469-1 Matrix: OTHR SOLID Listtype:ORBNALLFULL Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	
Phenol	4	8	ug/Kg	<MDL	
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	
2-Chlorophenol	4	8	ug/Kg	<MDL	
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	
Hexachloroethane	1	2	ug/Kg	<MDL	
Nitrobenzene	4	8	ug/Kg	<MDL	
Isophorone	10	20	ug/Kg	<MDL	
2-Nitrophenol	10	20	ug/Kg	<MDL	
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	
Naphthalene	2	4	ug/Kg	<MDL	
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	
2-Chloronaphthalene	4	8	ug/Kg	<MDL	
Acenaphthylene	2	4	ug/Kg	<MDL	
Dimethyl Phthalate	4	8	ug/Kg	<MDL	
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	
Acenaphthene	2	4	ug/Kg	<MDL	
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	
Fluorene	2	4	ug/Kg	<MDL	
Diethyl Phthalate	4	8	ug/Kg	<MDL	
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	
Pentachlorophenol	10	20	ug/Kg	<MDL	
Phenanthrene	2	4	ug/Kg	<MDL	
Anthracene	2	4	ug/Kg	<MDL	
Di-N-Butyl Phthalate	4	8	ug/Kg	11.2	B
Fluoranthene	2	4	ug/Kg	<MDL	
Pyrene	2	4	ug/Kg	<MDL	
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

Benzo(a)anthracene	2	4	ug/Kg	<MDL	
Chrysene	2	4	ug/Kg	<MDL	
Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	4.6	B
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	
Benzo(a)pyrene	2	4	ug/Kg	<MDL	
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	
Aniline	40	80	ug/Kg	<MDL	
Benzyl Alcohol	2	4	ug/Kg	<MDL	
2-Methylphenol	2	4	ug/Kg	<MDL	
4-Methylphenol	4	8	ug/Kg	<MDL	
Benzoic Acid	10	20	ug/Kg	28.9	B
2-Methylnaphthalene	2	4	ug/Kg	<MDL	
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	
Dibenzofuran	2	4	ug/Kg	<MDL	
Carbazole	2	4	ug/Kg	<MDL	
Coprostanol	40	80	ug/Kg	<MDL	
Caffeine	4	8	ug/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

SB:WG110469-2 MB:WG110469-1 Matrix: OTHR SOLID Listtype:ORBNALLFULL Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	58.9	59		14--101
Phenol	4	8	ug/Kg	<MDL	100	45.2	45		10--107
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	62.4	62		18--82
2-Chlorophenol	4	8	ug/Kg	<MDL	100	61.9	62		10--102
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	65.7	66		18--95
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	66	66		21--99
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	70.4	70		10--116
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	65.9	66		10--104
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	69.9	70		10--146
Hexachloroethane	1	2	ug/Kg	<MDL	100	64.5	65		17--92
Nitrobenzene	4	8	ug/Kg	<MDL	100	61.3	61		10--112
Isophorone	10	20	ug/Kg	<MDL	100	56.7	57		10--131
2-Nitrophenol	10	20	ug/Kg	<MDL	100	50.9	51		21--98
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	1.5	2	*	10--81
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	56.9	57		19--103
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	43.7	44		24--103
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	67.7	68		30--110
Naphthalene	2	4	ug/Kg	<MDL	100	70.6	71		17--94
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	89.9	90		10--97
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	55.9	56		27--98
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	61.9	62		25--96
Acenaphthylene	2	4	ug/Kg	<MDL	100	78.6	79		31--101
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	94.5	94		38--114
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	80.2	80		46--110
Acenaphthene	2	4	ug/Kg	<MDL	100	76.6	77		29--102
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	73.7	74		35--148
Fluorene	2	4	ug/Kg	<MDL	100	89.9	90		39--106
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	90.4	90		51--118
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	85.7	86		39--101
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	53.5	53		11--148
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	74.8	75		32--125
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	94.4	94		47--113
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	73	73		40--111
Pentachlorophenol	10	20	ug/Kg	<MDL	100	39.1	39		38--124
Phenanthrene	2	4	ug/Kg	<MDL	100	83.2	83		57--104
Anthracene	2	4	ug/Kg	<MDL	100	80.6	81		45--114
Di-N-Butyl Phthalate	4	8	ug/Kg	11.2	100	91.7	81		17--180
Fluoranthene	2	4	ug/Kg	<MDL	100	102	102		55--132
Pyrene	2	4	ug/Kg	<MDL	100	86.6	87		48--132
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	78.1	78		15--183
Benzo(a)anthracene	2	4	ug/Kg	<MDL	100	82.9	83		69--117
Chrysene	2	4	ug/Kg	<MDL	100	78.9	79		69--111

King County Environmental Laboratory Analytical QC Report

Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	4.6	100	83.3	79	10--182
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	77.5	77	10--200
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	100	64.4	64	50--121
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	100	80.4	80	58--128
Benzo(a)pyrene	2	4	ug/Kg	<MDL	100	61.8	62	15--137
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	100	90.6	91	51--132
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	100	87.4	87	53--129
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	100	88.1	88	46--126
Aniline	40	80	ug/Kg	<MDL	100	69	69	10--102
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	59.4	59	10--119
2-Methylphenol	2	4	ug/Kg	<MDL	100	29.1	29	16--91
4-Methylphenol	4	8	ug/Kg	<MDL	100	32.5	33	10--125
Benzoic Acid	10	20	ug/Kg	28.9	100	37.9	9 *	10--170
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	71.1	71	22--99
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	68.3	68	33--113
Dibenzofuran	2	4	ug/Kg	<MDL	100	79.6	80	37--97
Carbazole	2	4	ug/Kg	<MDL	100	99	99	44--179
Coprostanol	40	80	ug/Kg	<MDL	1000	347	35	10--159
Caffeine	4	8	ug/Kg	<MDL	100	98.1	98	45--159

King County Environmental Laboratory Analytical QC Report

MSD:WG110469-4 MS:WG110469-3 L51298-9 Matrix: FRSHWTRSED Listtype:ORBNALLFULL Method:SW846 3550B*SW846 8270D Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	100	47	47		10--119	100	56	56		17		0--100
Phenol	4	8	ug/Kg	<MDL	100	38.7	39		10--127	100	39	39		0		0--100
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	100	42.5	42		10--80	100	46	46		9		0--100
2-Chlorophenol	4	8	ug/Kg	<MDL	100	45.4	45		10--112	100	48.6	49		9		0--100
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	43.7	44		10--103	100	51.7	52		17		0--100
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	45.4	45		10--104	100	51.8	52		14		0--100
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	100	47.8	48		10--105	100	55.4	55		14		0--100
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	100	54.1	54		10--142	100	64.1	64		17		0--100
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	100	59.2	59		10--176	100	63.1	63		7		0--100
Hexachloroethane	1	2	ug/Kg	<MDL	100	43.3	43		10--89	100	51.6	52		19		0--100
Nitrobenzene	4	8	ug/Kg	<MDL	100	50.5	51		10--105	100	54.8	55		8		0--100
Isophorone	10	20	ug/Kg	<MDL	100	65	65		16--130	100	65.3	65		0		0--100
2-Nitrophenol	10	20	ug/Kg	<MDL	100	47	47		20--107	100	53.6	54		14		0--100
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	100	68.2	68		10--150	100	74.7	75		10		0--100
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	100	52	52		23--103	100	56.6	57		9		0--100
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	100	72.9	73		24--142	100	74.6	75		3		0--100
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	100	50.3	50		10--115	100	55.4	55		10		0--100
Naphthalene	2	4	ug/Kg	<MDL	100	49.5	49		12--97	100	53.6	54		10		0--100
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	100	56.1	56		10--97	100	59.1	59		5		0--100
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	100	75.8	76		26--153	100	72.8	73		4		0--100
2-Chloronaphthalene	4	8	ug/Kg	<MDL	100	59.2	59		26--111	100	62.9	63		7		0--100
Acenaphthylene	2	4	ug/Kg	<MDL	100	78.4	78		27--132	100	78.5	79		1		0--100
Dimethyl Phthalate	4	8	ug/Kg	<MDL	100	84	84		13--162	100	85.2	85		1		0--100
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	100	70.1	70		10--183	100	72.3	72		3		0--100
Acenaphthene	2	4	ug/Kg	<MDL	100	72.4	72		25--130	100	72.1	72		0		0--100
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	100	62.9	63		27--166	100	65	65		3		0--100
Fluorene	2	4	ug/Kg	<MDL	100	83.4	83		22--147	100	81.6	82		1		0--100
Diethyl Phthalate	4	8	ug/Kg	<MDL	100	83.4	83		31--150	100	81.4	81		2		0--100
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	79.3	79		25--139	100	76.7	77		3		0--100
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	100	80.3	80		10--169	100	71.2	71		12		0--100
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	100	75	75		16--162	100	75.8	76		1		0--100
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	100	96.4	96		30--146	100	93.6	94		2		0--100
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	100	71.6	72		18--151	100	71.4	71		1		0--100
Pentachlorophenol	10	20	ug/Kg	<MDL	100	27.4	27		17--170	100	28.2	28		4		0--100
Phenanthrene	2	4	ug/Kg	2.2	100	81.4	79		10--200	100	78.1	76		4		0--100
Anthracene	2	4	ug/Kg	<MDL	100	85	85		10--181	100	80.7	81		5		0--100
Di-N-Butyl Phthalate	4	8	ug/Kg	11.5	100	86.8	75		10--194	100	81.4	70		7		0--100
Fluoranthene	2	4	ug/Kg	4.82	100	100	96		12--188	100	91.5	87		10		0--100
Pyrene	2	4	ug/Kg	3.9	100	89.6	86		20--174	100	84.8	81		6		0--100
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	100	82.6	83		41--145	100	76.9	77		8		0--100
Benzo(a)anthracene	2	4	ug/Kg	<MDL	100	82.1	82		32--168	100	78.6	79		4		0--100
Chrysene	2	4	ug/Kg	2.2	100	78.7	77		14--184	100	75.7	74		4		0--100

King County Environmental Laboratory Analytical QC Report

Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	11.1	100	93.3	82		10--189	100	86.1	75	9		0--100
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	100	83	83		52--151	100	79.2	79	5		0--100
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	100	56	56		10--199	100	67.5	67	18		0--100
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	100	91.3	91		10--192	100	71.3	71	25		0--100
Benzo(a)pyrene	2	4	ug/Kg	<MDL	100	70.9	71		10--200	100	65.8	66	7		0--100
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	100	84.5	85		10--177	100	76.7	77	10		0--100
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	100	81.2	81		10--166	100	73.2	73	10		0--100
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	100	81.7	82		10--173	100	73.6	74	10		0--100
Aniline	40	80	ug/Kg	<MDL	100	<MDL	0	*	10--67	100	51	51	200	*	0--100
Benzyl Alcohol	2	4	ug/Kg	<MDL	100	46.4	46		10--138	100	51.9	52	12		0--100
2-Methylphenol	2	4	ug/Kg	<MDL	100	43.1	43		10--142	100	45.3	45	5		0--100
4-Methylphenol	4	8	ug/Kg	<MDL	100	47.9	48		10--163	100	50.8	51	6		0--100
Benzoic Acid	10	20	ug/Kg	53.3	100	55.8	2	*	10--158	100	65.5	12	143	*	0--100
2-Methylnaphthalene	2	4	ug/Kg	<MDL	100	54	54		22--112	100	61.2	61	12		0--100
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	100	74.9	75		23--166	100	71.6	72	4		0--100
Dibenzofuran	2	4	ug/Kg	<MDL	100	73.4	73		21--134	100	72.2	72	1		0--100
Carbazole	2	4	ug/Kg	<MDL	100	91.1	91		16--200	100	84.1	84	8		0--100
Coprostanol	40	80	ug/Kg	<MDL	1000	354	35		10--183	1000	304	30	15		0--100
Caffeine	4	8	ug/Kg	<MDL	100	86.8	87		17--195	100	79.5	79	10		0--100

SRM:WG110469-5 Matrix: FRSHWTRSED Listtype:ORBNALLFULL Method:SW846 3550B*SW846 8270D Project: Pkey:SED
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Naphthalene	130	533	ug/Kg	1630	260	16		10--29
Phenanthrene	270	533	ug/Kg	5200	3770	72		51--106
Anthracene	270	533	ug/Kg	1750	679	39		28--98
Fluoranthene	270	533	ug/Kg	8800	7910	90		45--126
Pyrene	270	533	ug/Kg	9570	7440	78		36--135
Benzo(a)anthracene	270	533	ug/Kg	4660	3110	67		66--124
Chrysene	270	533	ug/Kg	4800	4320	90		77--136
Benzo(b)fluoranthene	270	533	ug/Kg	3820	2480	65		52--190
Benzo(k)fluoranthene	270	533	ug/Kg	2270	3020	133		60--146
Benzo(a)pyrene	270	533	ug/Kg	4240	2480	59	*	60--116
Indeno(1,2,3-Cd)Pyrene	270	533	ug/Kg	2740	961	35		33--121
Dibenzo(a,h)anthracene	270	533	ug/Kg	419	651	156		10--200
Benzo(g,h,i)perylene	270	533	ug/Kg	2800	2050	73		15--120

King County Environmental Laboratory Analytical QC Report

LD:WG110469-6 L51298-10 Matrix: FRSHWTRSED Listtype:ORBNALLFULL Method:SW846 3550B*SW846 8270D Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
N-Nitrosodimethylamine	4	8	ug/Kg	<MDL	<MDL			0--35
Phenol	4	8	ug/Kg	<MDL	12.9	200	*	0--35
Bis(2-Chloroethyl)Ether	4	8	ug/Kg	<MDL	<MDL			0--35
2-Chlorophenol	4	8	ug/Kg	<MDL	<MDL			0--35
1,3-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			0--35
1,4-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			0--35
1,2-Dichlorobenzene	0.2	0.4	ug/Kg	<MDL	<MDL			0--35
Bis(2-Chloroisopropyl)Ether	4	8	ug/Kg	<MDL	<MDL			0--35
N-Nitrosodi-N-Propylamine	4	8	ug/Kg	<MDL	<MDL			0--35
Hexachloroethane	1	2	ug/Kg	<MDL	<MDL			0--35
Nitrobenzene	4	8	ug/Kg	<MDL	<MDL			0--35
Isophorone	10	20	ug/Kg	<MDL	<MDL			0--35
2-Nitrophenol	10	20	ug/Kg	<MDL	<MDL			0--35
2,4-Dimethylphenol	1	2	ug/Kg	<MDL	<MDL			0--35
Bis(2-Chloroethoxy)Methane	4	8	ug/Kg	<MDL	<MDL			0--35
2,4-Dichlorophenol	4	8	ug/Kg	<MDL	<MDL			0--35
1,2,4-Trichlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			0--35
Naphthalene	2	4	ug/Kg	<MDL	<MDL			0--35
Hexachlorobutadiene	0.5	1	ug/Kg	<MDL	<MDL			0--35
2,4,6-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			0--35
2-Chloronaphthalene	4	8	ug/Kg	<MDL	<MDL			0--35
Acenaphthylene	2	4	ug/Kg	<MDL	<MDL			0--35
Dimethyl Phthalate	4	8	ug/Kg	<MDL	<MDL			0--35
2,6-Dinitrotoluene	10	20	ug/Kg	<MDL	<MDL			0--35
Acenaphthene	2	4	ug/Kg	<MDL	<MDL			0--35
2,4-Dinitrotoluene	4	8	ug/Kg	<MDL	<MDL			0--35
Fluorene	2	4	ug/Kg	<MDL	<MDL			0--35
Diethyl Phthalate	4	8	ug/Kg	<MDL	<MDL			0--35
4-Chlorophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			0--35
N-Nitrosodiphenylamine	4	8	ug/Kg	<MDL	<MDL			0--35
1,2-Diphenylhydrazine	4	8	ug/Kg	<MDL	<MDL			0--35
4-Bromophenyl Phenyl Ether	4	8	ug/Kg	<MDL	<MDL			0--35
Hexachlorobenzene	0.1	0.2	ug/Kg	<MDL	<MDL			0--35
Pentachlorophenol	10	20	ug/Kg	<MDL	<MDL			0--35
Phenanthrene	2	4	ug/Kg	<MDL	<MDL			0--35
Anthracene	2	4	ug/Kg	<MDL	<MDL			0--35
Di-N-Butyl Phthalate	4	8	ug/Kg	12.2	12.4	1		0--35
Fluoranthene	2	4	ug/Kg	<MDL	<MDL			0--35
Pyrene	2	4	ug/Kg	<MDL	<MDL			0--35
Benzyl Butyl Phthalate	4	8	ug/Kg	<MDL	<MDL			0--35
Benzo(a)anthracene	2	4	ug/Kg	<MDL	<MDL			0--35
Chrysene	2	4	ug/Kg	<MDL	<MDL			0--35

King County Environmental Laboratory Analytical QC Report

Bis(2-Ethylhexyl)Phthalate	4	8	ug/Kg	8.27	11	28		0--35
Di-N-Octyl Phthalate	4	8	ug/Kg	<MDL	<MDL			0--35
Benzo(b)fluoranthene	2	4	ug/Kg	<MDL	<MDL			0--35
Benzo(k)fluoranthene	2	4	ug/Kg	<MDL	<MDL			0--35
Benzo(a)pyrene	2	4	ug/Kg	<MDL	<MDL			0--35
Indeno(1,2,3-Cd)Pyrene	2	4	ug/Kg	<MDL	<MDL			0--35
Dibenzo(a,h)anthracene	2	4	ug/Kg	<MDL	<MDL			0--35
Benzo(g,h,i)perylene	2	4	ug/Kg	<MDL	<MDL			0--35
Aniline	40	80	ug/Kg	<MDL	<MDL			0--35
Benzyl Alcohol	2	4	ug/Kg	<MDL	<MDL			0--35
2-Methylphenol	2	4	ug/Kg	<MDL	<MDL			0--35
4-Methylphenol	4	8	ug/Kg	<MDL	<MDL			0--35
Benzoic Acid	10	20	ug/Kg	43.4	133	102	*	0--35
2-Methylnaphthalene	2	4	ug/Kg	<MDL	<MDL			0--35
2,4,5-Trichlorophenol	10	20	ug/Kg	<MDL	<MDL			0--35
Dibenzofuran	2	4	ug/Kg	<MDL	<MDL			0--35
Carbazole	2	4	ug/Kg	<MDL	<MDL			0--35
Coprostanol	40	80	ug/Kg	<MDL	<MDL			0--35
Caffeine	4	8	ug/Kg	<MDL	<MDL			0--35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	2,4,6-Tri bromo phenol 29--112	2-Fluoro biphenyl 31--101	2-Fluoro phenol 10--112	d14-Ter phenyl 51--130	d4-1,2-Dichloro benzene 24--91	d4-2-Chloro phenol 11--105	d5-Nitro benzene 28--94	d5-Phenol 10--106
L51247-1								
L51247-2	60	60	30	62	47	46	62	49
L51247-3	88	65	33	84	50	49	56	35
L51247-4	82	64	32	87	42	54	68	42
L51247-5	77	55	26	80	39	37	42	25
L51247-6	78	67	78	91	50	47	54	35
L51247-7	81	60	27	83	44	38	39	26
L51247-8	81	70	31	105	53	38	47	32
L51247-9	71	48	25	88	38	35	36	24
L51247-10	79	62	32	96	48	40	41	28
L51298-1	75	66	29	80	50	45	63	50
L51298-2	74	53	28	80	44	38	57	31
L51298-3	76	63	31	76	48	45	63	42
L51298-4	80	61	32	79	48	43	48	36
L51298-5	75	62	29	77	44	40	46	33
L51298-6	65	56	27	73	45	32	28	28
L51298-7	67	61	27	75	45	31	27 *	28
L51298-8	71	55	25	77	36	25	19 *	19
L51298-9	73	58	27	76	46	43	53	40
L51298-10	72	57	29	79	45	45	51	43
WG110469-1	28 *	60	38	87	63	50	64	51
WG110469-2	52	62	39	81	85	64	61	57
WG110469-3	68	56	29	79	54	47	48	44
WG110469-4	67	58	62	75	64	50	53	47
WG110469-5	112	88	53	127	83	94	92	95
WG110469-6	75	63	27	84	50	50	58	47

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110470 EDC Compounds

MB:WG110470-1 Matrix: OTHR SOLID Listtype:OREDC Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	
Bisphenol A	10	20	ug/Kg	<MDL	
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	

SB:WG110470-2 MB:WG110470-1 Matrix: OTHR SOLID Listtype:OREDC Method:SW846 3550B*SW846 8270D Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	89.1	89		25--150
Bisphenol A	10	20	ug/Kg	<MDL	100	45.7	46		25--150
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	200	184	92		25--150

MSD:WG110470-4 MS:WG110470-3 L51298-9 Matrix: FRSHWTRSED Listtype:OREDC Method:SW846 3550B*SW846 8270D Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	100	121	121		25--150	100	110	110		10		0--40
Bisphenol A	10	20	ug/Kg	<MDL	100	69.3	69		25--150	100	66.5	66		4		0--40
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	200	183	92		25--150	200	170	85		8		0--40

LD:WG110470-6 L51298-10 Matrix: FRSHWTRSED Listtype:OREDC Method:SW846 3550B*SW846 8270D Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Total 4-Nonylphenol	20	40	ug/Kg	<MDL	<MDL			0--35
Bisphenol A	10	20	ug/Kg	<MDL	<MDL			0--35
Bis(2-ethylhexyl)adipate	10	20	ug/Kg	<MDL	<MDL			0--35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	D4-4-NONYL PHENOL 25--150
L51247-1	127
L51247-2	205 *
L51247-3	131
L51247-4	134
L51247-5	117
L51247-6	121
L51247-7	97
L51247-8	131
L51247-9	104
L51247-10	105
L51298-1	126
L51298-2	107
L51298-3	136
L51298-4	130
L51298-5	128
L51298-6	122
L51298-7	116
L51298-8	119
L51298-9	114
L51298-10	117
WG110470-1	18 *
WG110470-2	88
WG110470-3	117
WG110470-4	117
WG110470-6	119

King County Environmental Laboratory Analytical QC Report

Workgroup: WG111561 EDC Compounds

MB:WG111561-1 Matrix: OTHR SOLID Listtype:OREDC-LVI Method:TERNS (2002) Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Estrone	0.03	0.302	ug/Kg	0.077	B
Estradiol	0.05	0.504	ug/Kg	<MDL	
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	

SB:WG111561-2 MB:WG111561-1 Matrix: OTHR SOLID Listtype:OREDC-LVI Method:TERNS (2002) Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Estrone	0.03	0.302	ug/Kg	0.077	2.02	2.38	114		50--150
Estradiol	0.05	0.504	ug/Kg	<MDL	2.02	1.9	94		50--150
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	2.02	1.77	88		50--150

MSD:WG111561-4 MS:WG111561-3 L51298-2 Matrix: FRSHWTRSED Listtype:OREDC-LVI Method:TERNS (2002) Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Estrone	0.03	0.302	ug/Kg	0.12	2.02	2.31	108		50--150	2.02	2.51	119		10		0--200
Estradiol	0.05	0.504	ug/Kg	<MDL	2.02	1.86	92		50--150	2.02	2.08	103		11		0--200
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	2.02	1.72	85		50--150	2.02	1.91	95		11		0--200

LD:WG111561-5 L51298-9 Matrix: FRSHWTRSED Listtype:OREDC-LVI Method:TERNS (2002) Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Estrone	0.03	0.302	ug/Kg	0.063	0.051			0--35
Estradiol	0.05	0.504	ug/Kg	<MDL	<MDL			0--35
Ethynyl estradiol	0.05	0.504	ug/Kg	<MDL	<MDL			0--35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	Estradiol-d4 30--200	Estrone-d4 30--200	Ethynyl Estradiol-d4 30--200
L51247-1	105	97	106
L51247-2	163	139	136
L51247-3	94	87	103
L51247-4	137	116	140
L51247-5	107	95	116
L51247-6	74	69	81
L51247-7	98	88	109
L51247-8	98	97	108
L51247-9	74	69	82
L51247-10	102	96	109
L51298-1	84	78	88
L51298-2	68	66	73
L51298-3	91	88	96
L51298-4	109	101	116
L51298-5	98	94	100
L51298-6	98	98	103
L51298-7	96	93	102
L51298-8	105	103	112
L51298-9	110	99	114
L51298-10	108	99	112
WG111561-1	57	54	60
WG111561-2	66	60	70
WG111561-3	99	87	109
WG111561-4	97	83	108
WG111561-5	93	81	97

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110374 PBDE

MB:WG110374-1 Matrix: OTHR SOLID Listtype:ORPBDE Method:SW846 3550B*EPA 1614 Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
TriBDE-17	0.0067	0.0133	ug/Kg	<MDL	
TriBDE-28	0.0067	0.0133	ug/Kg	<MDL	
TetraBDE-71	0.0067	0.0133	ug/Kg	<MDL	
TetraBDE-47	0.0067	0.0133	ug/Kg	0.0198	B
TetraBDE-66	0.0067	0.0133	ug/Kg	<MDL	
PentaBDE-100	0.0067	0.0133	ug/Kg	<MDL	
PentaBDE-99	0.0067	0.0133	ug/Kg	0.013	B
PentaBDE-85	0.0067	0.0133	ug/Kg	<MDL	
HexaBDE-154	0.0067	0.0133	ug/Kg	<MDL	
HexaBDE-153	0.0067	0.0133	ug/Kg	<MDL	
HexaBDE-138	0.0067	0.0133	ug/Kg	<MDL	
HeptaBDE-183	0.0067	0.0133	ug/Kg	<MDL	
HeptaBDE-190	0.0067	0.0133	ug/Kg	<MDL	
DecaBDE-209	0.033	0.0667	ug/Kg	<MDL	

SB:WG110374-2 MB:WG110374-1 Matrix: OTHR SOLID Listtype:ORPBDE Method:SW846 3550B*EPA 1614 Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
TriBDE-17	0.0067	0.0133	ug/Kg	<MDL	0.417	0.391	94		50--150
TriBDE-28	0.0067	0.0133	ug/Kg	<MDL	0.417	0.447	107		50--150
TetraBDE-71	0.0067	0.0133	ug/Kg	<MDL	0.417	0.47	113		50--150
TetraBDE-47	0.0067	0.0133	ug/Kg	0.0198	0.417	3.32	793	*	50--150
TetraBDE-66	0.0067	0.0133	ug/Kg	<MDL	0.417	0.624	150		50--150
PentaBDE-100	0.0067	0.0133	ug/Kg	<MDL	0.417	1.2	288	*	50--150
PentaBDE-99	0.0067	0.0133	ug/Kg	0.013	0.417	5.28	1265	*	50--150
PentaBDE-85	0.0067	0.0133	ug/Kg	<MDL	0.417	0.729	175	*	50--150
HexaBDE-154	0.0067	0.0133	ug/Kg	<MDL	0.417	0.758	182	*	50--150
HexaBDE-153	0.0067	0.0133	ug/Kg	<MDL	0.417	1.03	246	*	50--150
HexaBDE-138	0.0067	0.0133	ug/Kg	<MDL	0.417	0.495	119		50--150
HeptaBDE-183	0.0067	0.0133	ug/Kg	<MDL	0.417	0.388	93		50--150
HeptaBDE-190	0.0067	0.0133	ug/Kg	<MDL	0.417	0.367	88		50--150
DecaBDE-209	0.033	0.0667	ug/Kg	<MDL	2.08	1.08	52		50--150

King County Environmental Laboratory Analytical QC Report

MSD:WG110374-4 MS:WG110374-3 L51298-2 Matrix: FRSHWTRSED Listtype:ORPBDE Method:SW846 3550B*EPA 1614 Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
TriBDE-17	0.013	0.0267	ug/Kg	<MDL	0.417	0.386	93		50--150	0.417	0.375	90		3		0--100
TriBDE-28	0.013	0.0267	ug/Kg	<MDL	0.417	0.432	104		50--150	0.417	0.437	105		1		0--100
TetraBDE-71	0.013	0.0267	ug/Kg	<MDL	0.417	0.395	95		50--150	0.417	0.387	93		2		0--100
TetraBDE-47	0.013	0.0267	ug/Kg	0.0425	0.417	0.473	103		50--150	0.417	0.547	121		16		0--100
TetraBDE-66	0.013	0.0267	ug/Kg	<MDL	0.417	0.439	105		50--150	0.417	0.481	115		9		0--100
PentaBDE-100	0.013	0.0267	ug/Kg	0.011	0.417	0.398	93		50--150	0.417	0.416	97		4		0--100
PentaBDE-99	0.013	0.0267	ug/Kg	0.0299	0.417	0.469	105		50--150	0.417	0.527	119		13		0--100
PentaBDE-85	0.013	0.0267	ug/Kg	<MDL	0.417	0.452	108		50--150	0.417	0.451	108		0		0--100
HexaBDE-154	0.013	0.0267	ug/Kg	<MDL	0.417	0.42	101		50--150	0.417	0.468	112		10		0--100
HexaBDE-153	0.013	0.0267	ug/Kg	0.159	0.417	0.53	89		50--150	0.417	0.606	107		18		0--100
HexaBDE-138	0.013	0.0267	ug/Kg	0.0207	0.417	0.478	110		50--150	0.417	0.452	103		7		0--100
HeptaBDE-183	0.013	0.0267	ug/Kg	<MDL	0.417	0.387	93		50--150	0.417	0.37	89		4		0--100
HeptaBDE-190	0.013	0.0267	ug/Kg	<MDL	0.417	0.409	98		50--150	0.417	0.405	97		1		0--100
DecaBDE-209	0.067	0.133	ug/Kg	0.0905	2.08	1.28	57		50--150	2.08	1.16	51		11		0--100

LCS:WG110374-5 Matrix: OTHR SOLID Listtype:ORPBDE Method:SW846 3550B*EPA 1614 Project: Pkey:STD
(Lab Control Sample)

Parameter	MDL	RDL	Units	True Value	LCS Value	% Rec.	Qual	Lab Limit	nance based Limits
TriBDE-17	0.64	1.28	ug/Kg	11.3	17.3	153	*	80--120	60--200
TriBDE-28	0.64	1.28	ug/Kg	45.9	56.4	123	*	80--120	48--153
TetraBDE-47	0.64	1.28	ug/Kg	487	675	139	*	80--120	57--186
PentaBDE-100	0.64	1.28	ug/Kg	142	159	112		80--120	53--148
PentaBDE-99	0.64	1.28	ug/Kg	873	1130	129	*	80--120	43--179
PentaBDE-85	0.64	1.28	ug/Kg	42.9	51.1	119		80--120	40--176
HexaBDE-154	0.64	1.28	ug/Kg	81.7	95.5	117		80--120	54--160
HexaBDE-153	0.64	1.28	ug/Kg	117	133	114		80--120	37--168
HexaBDE-138	0.64	1.28	ug/Kg	14.9	18.4	124	*	80--120	44--170
HeptaBDE-183	0.64	1.28	ug/Kg	42.1	42.1	100		80--120	45--171
DecaBDE-209	3.2	6.4	ug/Kg	2460	7430	302	*	80--120	90--200

King County Environmental Laboratory Analytical QC Report

LD:WG110374-6 L51298-10 Matrix: FRSHWTRSED Listtype:ORPBDE Method:SW846 3550B*EPA 1614 Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
TriBDE-17	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
TriBDE-28	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
TetraBDE-71	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
TetraBDE-47	0.0067	0.0133	ug/Kg	0.0687	0.0625	9		0--35
TetraBDE-66	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
PentaBDE-100	0.0067	0.0133	ug/Kg	0.0176	0.022	22		0--35
PentaBDE-99	0.0067	0.0133	ug/Kg	0.0372	0.0357	4		0--35
PentaBDE-85	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
HexaBDE-154	0.0067	0.0133	ug/Kg	0.0195	0.019	2		0--35
HexaBDE-153	0.0067	0.0133	ug/Kg	0.12	0.167	32		0--35
HexaBDE-138	0.0067	0.0133	ug/Kg	0.0335	0.0507	41	*	0--35
HeptaBDE-183	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
HeptaBDE-190	0.0067	0.0133	ug/Kg	<MDL	<MDL			0--35
DecaBDE-209	0.033	0.0667	ug/Kg	0.107	0.148	32		0--35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	Deca chloro biphenyl 50--150
L51247-1	79
L51247-2	81
L51247-3	84
L51247-4	82
L51247-5	75
L51247-6	78
L51247-7	82
L51247-8	93
L51247-9	90
L51247-10	83
L51298-1	85
L51298-2	84
L51298-3	83
L51298-4	80
L51298-5	85
L51298-6	88
L51298-7	85
L51298-8	81
L51298-9	80
L51298-10	82
WG110374-1	79
WG110374-2	82
WG110374-3	77
WG110374-4	81
WG110374-5	87
WG110374-6	79

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110373 PCB

MB:WG110373-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	
Total Aroclors	0.83	1.67	ug/Kg	<MDL	

SB:WG110373-2 MB:WG110373-1 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	13	52		39--121
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	19.4	78		53--140

MSD:WG110373-4 MS:WG110373-3 L51298-1 Matrix: FRSHWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	25	16.3	65		32--164	25	15.5	62		5		0--35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	25	20.2	81		28--144	25	19.2	77		5		0--35

SRM:WG110373-5 Matrix: OTHR SOLID Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
Aroclor 1254	2.8	5.56	ug/Kg	116	90.3	78		57--139

King County Environmental Laboratory Analytical QC Report

LD:WG110373-6 L51298-9 Matrix: FRSHWTRSED Listtype:ORPCBLL Method:SW846 3550B*SW846 8082A Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Aroclor 1016	0.83	1.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1221	1.7	3.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1232	1.7	3.33	ug/Kg	<MDL	<MDL			0--35
Aroclor 1242	0.83	1.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1248	0.83	1.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1254	0.83	1.67	ug/Kg	<MDL	<MDL			0--35
Aroclor 1260	0.83	1.67	ug/Kg	<MDL	<MDL			0--35
Total Aroclors	0.83	1.67	ug/Kg	<MDL	<MDL			0--35

Surrogate: (Lab Limits)	2,4,5,6-Tetra chloro m-xylene 10--118	Deca chloro biphenyl 12--158
L51247-1	64	77
L51247-2	73	77
L51247-3	53	81
L51247-4	71	80
L51247-5	48	72
L51247-6	51	81
L51247-7	48	91
L51247-8	71	64
L51247-9	45	91
L51247-10	64	81
L51298-1	49	87
L51298-2	39	91
L51298-3	61	88
L51298-4	65	84
L51298-5	72	88
L51298-6	54	72
L51298-7	54	85
L51298-8	52	87
L51298-9	35	72
L51298-10	50	71
WG110373-1	45	96
WG110373-2	39	83
WG110373-3	49	90
WG110373-4	38	87
WG110373-5	74	96
WG110373-6	39	89

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110372 Pesticides

MB:WG110372-1 Matrix: OTHR SOLID Listtype:ORPESTLL Method:SW846 3550B*SW846 8081B Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	
Beta-BHC	0.33	0.667	ug/Kg	<MDL	
Delta-BHC	0.33	0.667	ug/Kg	<MDL	
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	
Heptachlor	0.33	0.667	ug/Kg	<MDL	
Aldrin	0.67	1.33	ug/Kg	<MDL	
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	
Endosulfan I	0.67	1.33	ug/Kg	<MDL	
Dieldrin	0.67	1.33	ug/Kg	<MDL	
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	
Endrin	0.67	1.33	ug/Kg	<MDL	
Endosulfan II	0.67	1.33	ug/Kg	<MDL	
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	
Methoxychlor	3.3	6.67	ug/Kg	<MDL	
trans-Chlordane	0.33	0.667	ug/Kg	<MDL	
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	
Toxaphene	6.7	13.3	ug/Kg	<MDL	

King County Environmental Laboratory Analytical QC Report

SB:WG110372-2 MB:WG110372-1 Matrix: OTHR SOLID Listtype:ORPESTLL Method:SW846 3550B*SW846 8081B Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.68	55		20--99
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	4.99	75		66--102
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	5.11	77		63--108
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	4.04	61		27--130
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	4.48	67		20--137
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	3.98	60		28--113
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	4.97	75		59--107
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	5.17	77		62--104
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	5.74	86		58--139
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	5.69	85		75--111
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	6.1	91		60--160
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	5.38	81		72--109
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	6.05	91		78--121
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	0.72	11		10--77
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	4.82	72		61--104
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	5.92	89		57--145
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	6.82	102		72--131

MSD:WG110372-4 MS:WG110372-3 L51247-7 Matrix: FRSHWTRSED Listtype:ORPESTLL Method:SW846 3550B*SW846 8081B Project:421240C-300 Pkey:SED
(Matrix Spike Duplicate, Matrix Spike)

Parameter	MDL	RDL	Units	SAMP Value	True Value	MS Value	% Rec.	Qual	Lab Limit	True Value	MSD Value	% Rec.	Qual	RPD	Qual	Lab Limit
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	6.67	3.96	59		59--111	6.67	4.49	67		13		0--35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	5.08	76		60--119	6.67	5.57	84		10		0--35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	6.67	5.08	76		54--126	6.67	5.87	88		15		0--35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	6.67	4.61	69		61--135	6.67	5.1	77		11		0--35
Heptachlor	0.33	0.667	ug/Kg	<MDL	6.67	4.41	66		52--157	6.67	5.36	80		19		0--35
Aldrin	0.67	1.33	ug/Kg	<MDL	6.67	4.47	67		61--119	6.67	5.16	77		14		0--35
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	6.67	5.21	78		61--118	6.67	5.99	90		14		0--35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	6.67	5.21	78		64--113	6.67	6.02	90		14		0--35
Dieldrin	0.67	1.33	ug/Kg	<MDL	6.67	5.63	84		60--139	6.67	6.29	94		11		0--35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	6.67	5.18	78		59--125	6.67	6.02	90		14		0--35
Endrin	0.67	1.33	ug/Kg	<MDL	6.67	5.83	87		62--166	6.67	6.79	102		16		0--35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	6.67	5.12	77		36--146	6.67	5.86	88		13		0--35
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	6.67	5.63	84		41--157	6.67	5.9	89		6		0--35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	6.67	0.67	10		10--66	6.67	0.7	11		10		0--35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	6.67	4.55	68		46--113	6.67	5.1	77		12		0--35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	6.67	5.74	86		50--144	6.67	6.54	98		13		0--35
Methoxychlor	3.3	6.67	ug/Kg	<MDL	6.67	6.4	95		53--129	6.67	7	105		10		0--35

King County Environmental Laboratory Analytical QC Report

SRM:WG110372-5 Matrix: OTHR SOLID Listtype:ORPESTLL Method:SW846 3550B*SW846 8081B Project: Pkey:STD
(Std Reference Material)

Parameter	MDL	RDL	Units	True Value	SRM Value	% Rec.	Qual	Lab Limit
4,4'-DDT	5.3	10.7	ug/Kg	119	181	152		10--200
Alpha-Chlordane	2.7	5.33	ug/Kg	16.5	20.9	127		48--144

LD:WG110372-6 L51298-9 Matrix: FRSHWTRSED Listtype:ORPESTLL Method:SW846 3550B*SW846 8081B Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Alpha-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Beta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Delta-BHC	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Gamma-BHC (Lindane)	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Heptachlor	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Aldrin	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Heptachlor Epoxide	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Endosulfan I	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Dieldrin	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
4,4'-DDE	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Endrin	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Endosulfan II	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
4,4'-DDD	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Endrin Aldehyde	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Endosulfan Sulfate	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
4,4'-DDT	0.67	1.33	ug/Kg	<MDL	<MDL			0--35
Methoxychlor	3.3	6.67	ug/Kg	<MDL	<MDL			0--35
trans-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Alpha-Chlordane	0.33	0.667	ug/Kg	<MDL	<MDL			0--35
Toxaphene	6.7	13.3	ug/Kg	<MDL	<MDL			0--35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	2,4,5,6-Tetra chloro m-xylene 10--118	Deca chloro biphenyl 12--158
L51247-1	69	79
L51247-2	91	121
L51247-3	61	93
L51247-4	78	87
L51247-5	54	71
L51247-6	54	84
L51247-7	51	88
L51247-8	88	104
L51247-9	46	77
L51247-10	65	79
L51298-1	46	70
L51298-2	41	87
L51298-3	65	84
L51298-4	68	77
L51298-5	74	77
L51298-6	61	84
L51298-7	54	77
L51298-8	57	85
L51298-9	40	83
L51298-10	61	92
WG110372-1	46	106
WG110372-2	48	98
WG110372-3	37	84
WG110372-4	50	104
WG110372-5	78	74
WG110372-6	38	90

King County Environmental Laboratory Analytical QC Report

Workgroup: WG110421 WTPH-Dx

MB:WG110421-1 Matrix: OTHR SOLID Listtype:ORWTPH-DX Method:WDOE NWTPH-DX Project: Pkey:STD
(Method Blank)

Parameter	MDL	RDL	Units	MB Value	Qual
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	

SB:WG110421-2 MB:WG110421-1 Matrix: OTHR SOLID Listtype:ORWTPH-DX Method:WDOE NWTPH-DX Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	150	174	116		50--150

SB:WG110421-3 MB:WG110421-1 Matrix: OTHR SOLID Listtype:ORWTPH-DX Method:WDOE NWTPH-DX Project: Pkey:STD
(Spike Blank, Method Blank)

Parameter	MDL	RDL	Units	MB Value	True Value	SB Value	% Rec.	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	150	149	99		50--150

LD:WG110421-4 L51247-7 Matrix: FRSHWTRSED Listtype:ORWTPH-DX Method:WDOE NWTPH-DX Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	<MDL			0--35
Lube Oil Range (>C24)	25	25	mg/Kg	<MDL	<MDL			0--35

LD:WG110421-5 L51298-1 Matrix: FRSHWTRSED Listtype:ORWTPH-DX Method:WDOE NWTPH-DX Project:421240C-300 Pkey:SED
(Lab Duplicate)

Parameter	MDL	RDL	Units	SAMP Value	LD Value	RPD	Qual	Lab Limit
Diesel Range (>C12-C24)	25	25	mg/Kg	<MDL	<MDL			0--35
Lube Oil Range (>C24)	25	25	mg/Kg	27.7	<MDL	200	*	0--35

King County Environmental Laboratory Analytical QC Report

Surrogate: (Lab Limits)	2-Fluoro biphenyl 50--150	Penta cosane 50--150
L51247-1	93	125
L51247-2	94	173 *
L51247-3	92	117
L51247-4	94	134
L51247-5	92	112
L51247-6	89	104
L51247-7	91	106
L51247-8	93	130
L51247-9	93	112
L51247-10	95	143
L51298-1	92	117
L51298-2	91	105
L51298-3	91	124
L51298-4	107	147
L51298-5	94	117
L51298-6	92	130
L51298-7	92	137
L51298-8	94	111
L51298-9	92	111
L51298-10	92	108
WG110421-1	90	101
WG110421-2	90	102
WG110421-3	106	103
WG110421-4	89	103
WG110421-5	92	114

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4xRule indicates no MS/MSD recovery was calculated due to the 4x rule.

King County

Water and Land Resources Division
Environmental Laboratory
Department of Natural Resources and Parks
322 West Ewing Street
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Memorandum

DATE: March 22, 2013

TO: Dean Wilson,
DNRP/WLRD/STS/WQQ - Freshwater Assessment Group

FROM: Fritz Grothkopp
DNRP/WLRD/LAB - Laboratory Project Management

RE: Lower Duwamish Project, Green River Inputs, Bulk Sediment Collection, August 2012, Supplemental QA1 information

CC: Jeff Stern
DNRP/WTD - Environmental and Community Services Section

This memo summarizes additional information regarding the sampling and analysis of 35 freshwater sediment samples collected August 13, 14, 15, 27, 28, 29 and 30, 2012. This document will be combined with a full validation report on the QC data to provide full QA1 information for the sample results.

Sample Collection:

This section describes sampling activities associated with the 35 freshwater sediment samples collected August 13, 14, 15, 27, 28, 29 and 30, 2012. Sampling activities were conducted following general guidance suggested in the Puget Sound Protocols (PSEP, 1996 and 1998), and in the SAP.

Sampling Locations and Station Positioning

Sampling locations (stations) were selected and the prescribed coordinates determined prior to field activities. The prescribed coordinates for these stations are presented in the following table. All station coordinates are recorded in state plane coordinate system North American Datum 1983 (NAD83). These coordinates come from the laboratory LIMS system.

Sample Location Table

Lab Number	Station ID	Description	Prescribed Northing	Prescribed Easting
L56024-1	A315	HILL CREEK (MILL)//BRIDGE AT 68TH AND S 261ST, AKA MILL CR	137218	1289725
L56024-2	SD315	MILL CRK AT W.VALLEY HWY NEAR DAIRY	133275	1289415
L56024-3	FR315	MILL CRK ON FRONTAGE RD	129960	1290680
L56024-4	TS315	MILL CRK NEAR 1ST NW AND 37TH NW	127160	1290765
L56024-5	ED315	MILL CRK ON M ST NEAR EMERALD DOWNS	122530	1290545
L56024-7	PR315	MILL CRK AT PEASLEY PARK AND RIDE	113555	1287170
L56024-8	PC315	MILL CRK ON PEASLEY CANYON RD	117340	1281940

L56024-9	UH315	MILL CRK AT 321ST ST.	118130	1281775
L56024-11	IT318	EMILL CRK NEAR 7235 S. 182ND	163195	1292010
L56024-12	DT318	EMILL CRK 196TH AND72ND	158960	1291450
L56024-13	FS318	EMILL CRK NEAR 72ND ST. FS	155285	1291205
L56024-14	CS318	EMILL CRK NEAR 22227 76TH ST	150045	1292480
L56024-15	AA318	EMILL CRK NOVAK LN/CENTRAL	146780	1294800
L56024-16	EP318	EMILL CRK AT EARTHWORKS PARK	142700	1295940
L56024-17	EG318	EMILL CRK AT 104TH/SE 267TH	135305	1301075
L56024-19	SH318	EMILL CRK NEAR SCENIC HILL SCHOOL	137710	1299685
L56024-20	AB320	COVINGTON CRK AT 168TH WAY	119105	1321350
L56024-21	CC320	COVINGTON CREEK AT SE 323ND ST	124875	1324254
L56024-22	C320	COVINGTON CREEK//BRIDGE ON KENT BLACK DIAMOND RD NEAR INTERSECTION WITH THOMAS RD	116442	1327037
L56024-23	CD320	COVINGTON CRK AT 192ND SE	113590	1329470
L56024-24	PT320	COVINGTON CRK NEAR SE 304TH AND 220TH	122575	1338290
L56024-25	Z320	COVINGTON CREEK BELOW LAKE SAWYER AT 224TH AVE SE	124875	1339866
L56024-26	S320	COVINGTON CR. ON HWY 169 NEAR SE 288	126368	1346760
L56024-27	D320	JENKINS CREEK//BRIDGE ON KENT BLACK DIAMOND RD NEAR 157TH AVE SE INTERSECTION	126881	1319039
L56024-28	WX320	JENKINS CRK AT WAX RD AND 164TH	129990	1322235
L56024-29	JK320	JENKLINS CREEK DOWNSTREAM OF KENT KANGLEY RD	133151	1325834
L56024-30	FR320	JENKINS CRK AT FRONTAGE RD AND HWY 18	137155	1326790
L56024-33	LW320	JENKINS LK. WILDERNESS 224TH AVE	140055	1339395
L56024-34	FL319	GREEN RIVER, DOWNSTREAM OF CONFLUENCE WITH BLACK RIVER, FOSTER LINKS GC	177997	1288012
L56024-35	0318	GREEN RIVER/EAST VALLEY HWY BRDG/EAST VALLEY HIGHWAY BRIDGE	134927	1294280
L56024-36	A319	GREEN RIVER/ABOVE SOOS CR/BRIDGE ON AUBURN-BLACK DIAMOND RD AT SE GREEN VALLEY RD	113108	1307302
L56024-37	FG319	GREEN RIVER, FLAMING GEYSER SP, UPSTREAM OF NEWAUKUM CREEK	104038	1341097
L56024-38	0320	BIG SOOS CREEK//FOOTBRIDGE AT HATCHERY NEAR MOUTH OF STREAM	115400	1309035
L56024-39	X322	NEWAUKUM CREEK NEAR THE MOUTH OFF OF 358TH SE	105523	1334258
L56024-40	0317	SPRINGBROOK CREEK//BRIDGE AT N END OF LONGACRES	173079	1294315

The coordinates found in LIMS for samples L56024-21, 22 and 24 were different from those listed in the SAP. It was determined that these three locations were sampled at the coordinates found in the SAP therefore project goals were met. The correct coordinates have been updated in the laboratory LIMS system.

Sediment grab samples were collected by wading into the stream. Samples were collected within the width and reach of each station such that representative depositional material was obtained. This is consistent with the specifications in the SAP.

Sample Description Table

Lab Sample #	Locator	Sample Collection	Sediment Depth (from surface, cm)	Sample Usage
L56024-1	A315	Surface Grabs	5-10	Chemistry
L56024-2	SD315	Surface Grabs	5-10	Chemistry
L56024-3	FR315	Surface Grabs	3-8	Chemistry
L56024-4	TS315	Surface Grabs	5-10	Chemistry
L56024-5	ED315	Surface Grabs	5-10	Chemistry
L56024-7	PR315	Surface Grabs	5-7	Chemistry
L56024-8	PC315	Surface Grabs	3-5	Chemistry
L56024-9	UH315	Surface Grabs	5-10	Chemistry
L56024-11	IT318	Surface Grabs	3-8	Chemistry
L56024-12	DT318	Surface Grabs	3-8	Chemistry
L56024-13	FS318	Surface Grabs	3-8	Chemistry
L56024-14	CS318	Surface Grabs	5-10	Chemistry
L56024-15	AA318	Surface Grabs	3-8	Chemistry
L56024-16	EP318	Surface Grabs	3-8	Chemistry
L56024-17	EG318	Surface Grabs	3-8	Chemistry
L56024-19	SH318	Surface Grabs	3-8	Chemistry
L56024-20	AB320	Surface Grabs	5-10	Chemistry

L56024-21	CC320	Surface Grabs	3-5	Chemistry
L56024-22	C320	Surface Grabs	5-10	Chemistry
L56024-23	CD320	Surface Grabs	3-5	Chemistry
L56024-24	PT320	Surface Grabs	3-5	Chemistry
L56024-25	Z320	Surface Grabs	3-5	Chemistry
L56024-26	S320	Surface Grabs	5-10	Chemistry
L56024-27	D320	Surface Grabs	5-10	Chemistry
L56024-28	WX320	Surface Grabs	3-8	Chemistry
L56024-29	JK320	Surface Grabs	3-8	Chemistry
L56024-30	FR320	Surface Grabs	3-5	Chemistry
L56024-33	LW320	Surface Grabs	3-8	Chemistry
L56024-34	FL319	Surface Grabs	3-8	Chemistry
L56024-35	0318	Surface Grabs	3-8	Chemistry
L56024-36	A319	Surface Grabs	3-5	Chemistry
L56024-37	FG319	Surface Grabs	3-5	Chemistry
L56024-38	0320	Surface Grabs	5-10	Chemistry
L56024-39	X322	Surface Grabs	3-7	Chemistry
L56024-40	0317	Surface Grabs	5-10	Chemistry

Sample Collection

Sediment was collected at 33 stations using stainless steel spoons. One station (FL315) was sampled using a petit Ponar sampler and one station (0317) was sampled using PVC core tubes. Cored samples were collected from shallow water (<2 ft.) by pushing the core tubes into the sediment to a depth of at least 5 cm. A stainless steel spatula or gloved hand was inserted under the tube mouth to trap the sediment inside as the tube was removed from the stream. Tubes may have been slightly angled to allow drainage of excess water, but fines were not allowed to escape. Sediment in the tube was then transferred to a clean, stainless steel compositing container. Several separate cores may have been collected in order to acquire sufficient sample volume to perform all chemistry analyses. A spoon was used at most locations since the core tubes typically would not easily penetrate to 5 cm. Sediment was scooped up as efficiently as possible with the spoons and transferred to a stainless steel bucket for compositing. The Ponar sampler was used at the location where access via a bridge was possible.

Five locations had stagnant water and were flooded but were sampled. The locations are: FR315, FS318, CS318, EG318 and LW320. Three locations were dry and were not sampled. The locations are: MS315, LD315 and DT320. A field observation form is attached to this memo describing in detail the sampling effort at each location.

Sample Handling

For the sample collected with tubes, the entire contents of all core tubes collected were emptied directly into a stainless steel bucket. If excess water was present, it was decanted once the fines had been allowed to settle. A stainless steel spoon or spatula was then used to homogenize the sample by stirring. Rocks or other debris one half-inch or larger in diameter were removed and discarded. For spooned samples, the contents of as many spoons of material as needed were emptied directly into a stainless steel bowl. Excess water if present was decanted once the fines had been allowed to settle. The spoon was then used to homogenize the sample by stirring. Any rocks or other debris one half-inch or larger in diameter were removed and discarded. For AVS, an undisturbed portion of sediment was placed in a sample jar.

Aliquots of the homogenized sediment were subsampled into individual, pre-labeled containers for chemistry testing except as noted above. Chemical preservative, if needed, was added. Sample containers were supplied by the King County Environmental Laboratory and were pre-cleaned according to analytical specifications.

Decontamination

Dedicated sets of core tubes, spoons, Ponar sampler and other homogenizing/subsampling equipment were assigned to each station, precluding the need for decontamination in the field.

Sample Storage and Preservation

Samples were stored in ice-filled coolers from the time of collection until delivery to the King County Environmental Laboratory. Samples were delivered under chain-of-custody and maintained as such throughout the analytical process. Samples were stored frozen (-18°C) by the laboratory until analysis with the exception of samples for particle size distribution (PSD) analysis and acid volatile sulfide. Sample aliquots for these analyses were stored refrigerated at approximately 4°C.

SAP Discussion

Locations for samples L56024-38, 39 and 40 were narratively discussed in Section 1.1 of the SAP, but were not listed in Table 1. These locations were selected for sampling to provide data for Dioxin/Furan parameters at the mouths of the three tributaries to the Green River. The samples were logged in for conventionals and Dioxin Furan analyses only.

MDL Targets

The wet weight MDL values from the SAP were compared with those reported with the data. A summary spreadsheet is attached that highlights those MDL values that are above the SAP values.

Conventionals

The method detection limits (MDLs) reported for conventionals parameters are within the requirements defined in the SAP with the following exceptions.

For TOC, reported MDLs and RDLs were higher than SAP requirements for most samples. All samples that had higher detection limits had reportable levels of these parameters thus the project goals were not compromised.

For PSD analysis, all samples have MDLs above the SAP values for Silt and Clay; All but four samples have MDLs above the SAP for Gravel and Sand. Six samples had no reportable Gravel fraction with elevated MDLs. One sample had no reportable Silt fraction with elevated MDLs. This is not expected to have compromised the project goals.

For AVS, reported MDLs and RDLs were higher than SAP requirements for most samples. All samples that had higher detection limits had reportable levels of these parameters thus the project goals were not compromised.

Metals

The method detection limits (MDLs) reported for Metals parameters are within the requirements defined in the draft SAP or detectable levels were reported for all samples.

Organics

Chlorinated Pesticides

Samples L56024-13, 14, 15 and 17 had MDL values that were greater than the SAP values. The samples were diluted to eliminate matrix interference.

PCB

The MDLs for Aroclor 1254 and 1260 were elevated in sample L56024-14. The sample had reportable values for these analytes thus project goals were not compromised.

Semivolatile Organics and EDC compounds

The table of compounds listed below exceeds the SAP MDLs for various samples. Some samples required dilution in order to reduce matrix interference and other co-extractives present in the extracts. Some samples required dilution in order to bring the compound within the calibration range of the instrument. Not all compounds with elevated MDLs had detected amounts reported. Of these, only Di-N-Octyl Phthalate had elevated MDLs that exceeded the sediment quality guidelines in Tables 2 or 3.

1,2,4-Trichlorobenzene	Benzo(g,h,i)perylene	*Coprostanol*
2,4-Dimethylphenol	Benzoic Acid	Dibenzo(a,h)anthracene
2-Methylnaphthalene	Benzyl Butyl Phthalate	Di-N-Octyl Phthalate
3-,4-Methylphenol	*Bis(2-ethylhexyl)adipate*	Hexachlorobutadiene
Benzo(a)anthracene	Bis(2-Ethylhexyl)Phthalate	Indeno(1,2,3-Cd)Pyrene
Benzo(a)pyrene	*Bisphenol A*	Naphthalene
Benzo(b,j,k)fluoranthene	Chrysene	Pyrene

QC Limits

The QC limits used in the QC reports were reviewed against those listed in the SAP. All of the control limits were correct with the following exceptions. The exceptions were control limits that were updated prior to analysis of the samples. Control limits may be updated annually.

Analyte	QC Type	SAP Control Limit (%)	New Control Limit (%)
Nickel, Total, ICPMS	Sed LCS	80 to 120	70 to 105
Arsenic, Total, ICPMS	Sed LCS	80 to 120	66 to 144
Zinc, Total, ICPMS	Soil LCS	80 to 120	80 to 121

If you have any questions or need additional information, please call me at 684-2327.

Login: P56024 | Green River and Trib Sediments 2012 | Personnel: J. POWER

Project: 423589-330-4

CHAIN OF CUSTODY

Relinquished by: JEAN POWER	Date: 8/13/2012	Time: 1603
Received by: [illegible]	Date: 8/13/12	Time: 1603
Sample Numbers: L56024 1, 2, 4, 5 + 40		[All]

Sample Number	P56024-1	P56024-2	P56024-3 *
QC Link			
Locator	A315	SD315	FR315
Short Loc Desc	MILL CR	Mill Cr 2	Mill Cr 3
Locator Desc	HILL CREEK (MILL)//BRIDGE AT 68TH AND S 261ST	MILL CRK AT W.VALLEY HWY NEAR DAIRY	MILL CRK ON FRONTAGE RD
Site	STREAMS	STREAMS	STREAMS
Comments	JP	JP	JP
Start Date/Time	13-AUG-12/1135	13-AUG-12/1220	29-AUG-12/1130
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	20 SPOONS COLLECTED UNDER BRIDGE	20 SPOONS. LOTS OF PLANT DEBRIS, HAY	30 SPOONS. MUCH PLANT DEBRIS, CANARY GRASS
SED DEPTH	5-10 cm	5-10 cm	3-8 cm
SED TYPE	23 ~~W~~ P 26	32 ~~W~~ P 26	23 P 27
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB MUCH CANARY GRASS, LEAVES, ETC.

~20 SPOONS
SILT
SAND
BROWN
H2S SL.
STICKY

~20 SPOONS
SAND
SILT
~~SA~~ BROWN
H2S SLIGHT
WOOD, ROCKS
HAY

~~NOT POSSIBLE TO SAMPLE 8/13/12.~~
~~DAMMED UP~~ + FLOODED WAY TOO DEEP + TOO MUCH CANARY GRASS

SILT
SAND
BROWN
H2S MOD
W/P
~30 SPOONS

~~PSD QC~~

8/29/12 C.O.C. ON BACK →

8/29/12
C.O.C.

CHAIN OF CUSTODY

RELINQUISHED BY	Date	Time
JEAN Power	8/29/12	1632
RECEIVED BY	Date	Time
M	8/29	1632
Sample Number(s)		
L56024 3, 34, 35 (All)		

Login: P56024 Green River and Trib Sediments 2012 Personnel: JP

Project: 423589-330-4

NOT COLLECTED

Sample Number	P56024-4	P56024-5	P56024-6 *
QC Link			
Locator	TS315	ED315	MS315
Short Loc Desc	Mill Cr 4	Mill Cr 5	Mill Cr 6
Locator Desc	MILL CRK NEAR 1ST NW AND 37TH NW	MILL CRK ON M ST NEAR EMERALD DOWNS	MILL CRK ON MAIN ST WEST OF 167
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	13-AUG-12/1325	13-AUG-12/1420	
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	15 SPOONS	15 SPOONS. MUCH PLANT DEBRIS. CANARY GRASS	
SED DEPTH	5-10 cm	5-10 cm	
SED TYPE	23P27	23P26	
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS ? 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB

~15 SPOONS
SILT
SAND
BROWN
H2S MOD
W/P DEBRIS

~15 SPOONS
SILT
SAND
BROWN
H2S SL
W/P DEBRIS
CANARY GRASS
CITY

* POSSIBLY NOT SAMPLE-ABLE. VISITED 8/13/12. SMALL DITCH W/ STAGNANT WATER

Login: P56024 **Green River and Trib Sediments 2012** Personnel: JP

Project: 423589-330-4

CHAIN OF CUSTODY
RELINQUISHED BY: JP Drake 8/14/12 Time 1645
RECEIVED BY: [illegible] 8/14/12 Time 1645
Sample Numbers: S6024 7-9 20-22 (All)

Sample Number	P56024-7	P56024-8	P56024-9
QC Link			
Locator	PR315	PC315	UH315
Short Loc Desc	Mill Cr 7	Mill Cr 8	Mill Cr 9
Locator Desc	MILL CRK AT PEASLEY PARK AND RIDE	MILL CRK ON PEASLEY CANYON RD	MILL CRK AT 321ST ST.
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	14-AUG-12/1050	14-AUG-12/1140	14-AUG-12/1225
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	20 SPOONS	25 SPOONS. SUBSTRATE MOSTLY COBBLES.	15 SPOONS. DEPOSITION AREA U.S. SIDE OF ROAD
SED DEPTH	5-~~10~~ 7 Cm	3-5 Cm	5-10 Cm
SED TYPE	32P2Ø	34P2Ø	23P27
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB

VERY DIFFICULT ACCESS - OVERGROWN

~20 SPOONS
SAND
SILT
BROWN
NO ODOR
W/P

~25 SPOONS
MOSTLY COBBLE
~1/3 MATERIAL TAKEN FROM AREA UNDER CULVERT GRATE

SAND
GRAVEL
BROWN/GREY
NO ODOR
W/P

~15 SPOONS

SILT
SAND
BROWN
H2S MOD
W/P

Login: P56024 **Green River and Trib Sediments 2012** **Personnel:** JP

Project: 423589-330.4

8/30/12 C.O.C. ON BACK OF THIS SHEET.

NOT COLLECTED

Sample Number	P56024-10	P56024-11	P56024-12
QC Link			
Locator	LD315	IT318	DT318
Short Loc Desc	Mill Cr 10	Emill Cr 1	EmillCr 2
Locator Desc	MILL CRK NEAR 303RD CT	EMILL CRK NEAR 7235 S. 182ND	EMILL CRK 196TH AND72ND
Site	STREAMS	STREAMS	STREAMS
Comments	15-AUG-12/	30-AUG-12/1215	27-AUG-12/1420
Start Date/Time	~~14~~ AUG-12/		
End Date/Time		JP	SH/JP
Time Span			
Sample Depth			
SAMP INFO		15 • SPOONS. D.S. OF RR TRESTLE. STRANGE ODOR	20 SPOONS. STRANGE CREOSOTE-LIKE ODOR
SED DEPTH		3-8 cm	3-8 cm
SED TYPE		23P21	23P21
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB SILT SAND BROWN WEIRD SMELL W/P ~15 SPOONS JUST D.S. OF RR TRESTLE	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB

40TH PL. SOUTH/ S 296TH TO EAST

ACROSS FROM 29501 30TH PLS

NORTH OF S. 298TH INTERSECTION

*DRY ON 8/15/12

C.O.C. 8/27/12

SILT SAND BROWN-GREEN STRANGE ODOR CREOSOTE? W/P DEBRIS

JEAN POWER 8/27/12 1547 ~~8/15/12 1643~~

8-27-12 1547

L56024 ~~10~~, 12, 28, 29, 30, 33, 36 (All)

~20 SPOONS

8/30/12 C.O.C.

RELINQUISHED BY: JEAN POWER	8/30/12	Time 1355
RECEIVED BY: [illegible]	8-30-12	Time 1355
Sample No. L56024-11		(All)

Login: P56024 **Green River and Trib Sediments 2012** **Personnel:** SH/JP

Project: 423589-330-4

CHAIN OF CUSTODY
RELINQUISHED BY: JEAN POWER 8/28/12 1640
RECEIVED BY: DRK 8/28/12 1640
Sample Number(s): P56024 13-17+19 (All)

Sample Number	P56024-13	P56024-14	P56024-15
QC Link			
Locator	**FS318**	**CS318**	**AA318**
Short Loc Desc	Emill Cr 3	Emill Cr 4	Emill Cr 5
Locator Desc	EMILL CRK NEAR 72ND ST. FS	EMILL CRK NEAR 22227 76TH ST	EMILL CRK NOVAK LN/CENTRAL
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	28-AUG-12/1500	28-AUG-12/1440	28-AUG-12/1200
End Date/Time	SH/JP	SH/JP	JP
Time Span			
Sample Depth			
SAMP INFO	15 SPOONS. NEARLY STAGNANT. SLIGHT SHEEN. H2S MOD	15 SPOONS. NEARLY STAGNANT. H2S MOD	22 SPOONS. H2S SLIGHT.
SED DEPTH	3-8 cm	5-10 cm	3-8 cm
SED TYPE	23P27	23P27	23P26
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB
	SILT SAND BROWN W/P H2S MOD NEARLY STAGNANT SLIGHT SHEEN ~15 SPOONS	SILT SAND BROWN-GREEN W/P H2S MOD. 15 SPOONS ~~U.S.~~ D.S. OF CABINET SHOP NEARLY STAGNANT	SILT SAND BROWN W/P H2S SLIGHT 22 SPOONS D.S. OF CONCRETE CULVERT SOME FLOW

Login: P56024 Green River Trib Seds- August Version Personnel: SH/JP

Project: 423589-330-4

	BENTHOS		BENTHOS
Sample Number	**P56024-16**	**P56024-17**	**P56024-19**
QC Link			
Locator	**EP318**	**EG318**	**SH318**
Short Loc Desc	Emill Cr 6	Emill Cr 7	Emill Cr 8
Locator Desc	EMILL CRK AT EARTHWORKS PARK	EMILL CRK AT 104TH/SE 267TH	EMILL CRK NEAR SCENIC HILL SCHOOL
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	28-AUG-12/1000	28-AUG-12/1100	28-AUG-12/1320
End Date/Time	SH/JP	JP	SH/JP
Time Span			
Sample Depth			
SAMP INFO	20 SPOONS. UNDER PED. BRIDGE	25 SPOONS. NEARLY STAGNANT. H2S MOD!	20 SPOONS.
SED DEPTH	3-8 cm	3-8 cm	3-8 cm
SED TYPE	3 2 P 2 1	2 3 P 2 7	3 2 P 2 1
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB
	SAND SILT BROWN W/P DEBRIS NAT. ODOR ~20 SPOONS UNDER PED. BRIDGE	SILT SAND BROWN W/P H2S MOD ~25 SPOONS ESSENTIALLY STAGNANT	SAND SILT BROWN NAT. ODOR W/P DEBRIS 20 SPOONS JUST D.S. OF TRAIL

Login: P56024 Green River and Trib Sediments 2012 Personnel: JP

Project: 423589-330-4

Sample Number	P56024-20	P56024-21	P56024-22
QC Link			
Locator	AB320	CC320	C320
Short Loc Desc	Cov Cr 1	COV323	CVNGT CR
Locator Desc	COVINGTON CRK AT 168TH WAY	COVINGTON CREEK AT SE 323ND ST	COVINGTON CREEK//BRIDGE ON KENT BLACK DIAMOND
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	14-AUG-12/1415	14-AUG-12/1450	14-AUG-12/1525
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	15 SPOONS.	20 SPOONS. MUCH COBBLE; LIMITED FINES.	15 SPOONS U.S. OF BRIDGE
SED DEPTH	5-10 cm	3-5 cm	5-10 cm
SED TYPE	32W20	34P21	32P21
Dept, Matrix, Prod			
	3 SE AVS	3 SE AVS	3 SE AVS
	3 SE PH	3 SE PH	3 SE PH
	3 SE PSD	3 SE PSD	3 SE PSD
	3 SE TOC	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NPDES ICPMS	6 SE NPDES ICPMS	6 SE NPDES ICPMS
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE SEM ICP	6 SE SEM ICP	6 SE SEM ICP
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE CLPEST	7 SE CLPEST	7 SE CLPEST
	7 SE EDC	7 SE EDC	7 SE EDC
	7 SE PBDE	7 SE PBDE	7 SE PBDE
	7 SE PCB	7 SE PCB	7 SE PCB
	~15 SPOONS	~20 SPOONS	15 SPOONS
	SAND SILT BROWN NO ODOR WOOD	SAND GRAVEL BROWN/GR NAT. ODOR W/P	SAND SILT BROWN NAT. ODOR W/P
	UNDER BRIDGE SLIGHTLY DS	MUCH COBBLE NOT MANY FINES	U.S. OF BRIDGE

Login: P56024 Green River and Trib Sediments 2012 Personnel: JP

Project: 423589-330-4

RELINQUISHED BY: JEAN Power 8/15/12 1642
RECEIVED BY: 8-15-12 1642
Sample Number: L56024 23-27 (All)

Sample Number	P56024-23	P56024-24	P56024-25
QC Link			
Locator	CD320 CD320	PT320	Z320
Short Loc Desc	Cov Cr 4 COVCR4	Cov Cr 5	COVSWYR
Locator Desc	COVINGTON CRK AT 192ND SE	COVINGTON CRK NEAR SE 304TH AND 220TH	COVINGTON CREEK BELOW LAKE SAWYER AT 224TH AV
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	15-AUG-12 / 1145	15-AUG-12 / 1215	15-AUG-12 / 1245
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	15 SPOONS. DS OF BRIDGE H2S SLIGHT	15 SPOONS, H2S SLIGHT	20 SPOONS H2S SLIGHT
SED DEPTH	3-5 cm	3-5 cm	3-5 cm
SED TYPE	32P26	~~32~~ 23P26	23P26
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNALLFULL 7 SE CLPEST 7 SE EDC 7 SE PBDE 7 SE PCB

~15 SPOONS SAND SILT BROWN H2S SL W/P JUST D.S. OF BRIDGE	~15 SPOONS SILT / SAND ~50/50 BROWN H2S SL W/P 30 FT US OF TRAIL	~20 SPOONS SILT SAND BROWN H2S SL W/P

- 26 - COVINGTON

15-AUG-12 / 1400

~ 20 SPOONS

SILT
SAND
BROWN
NAT. ODOR
W/P

JUST D.S.
OF TRAIL
CULVERTS

Login: P56024 Green River and Trib Sediments 2012 Personnel: JP

Project: 423589-330-4

Sample Number	P56024-26	P56024-27	P56024-28
QC Link			
Locator	S320	D320	WX320
Short Loc Desc	Creation	JNKIN CR	Jenkins 2
Locator Desc	CLEVELAND CR. ON HWY 169 NEAR SR 28	JENKINS CREEK//BRIDGE ON KENT BLACK DIAMOND R	JENKINS CRK AT WAX RD AND 164TH
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	15-AUG-12/1400	15-AUG-12/1450	27-AUG-12/1000
End Date/Time			
Time Span			
Sample Depth			
SAMP INFO	20 SPOONS H2S SLIGHT	15 SPOONS, APPROX 50/50 SAND/SILT	20 SPOONS. VERY FINE FLOCY MATERIAL H2S MOD
SED DEPTH	5-10 CM	5-10 CM	3-8 CM
SED TYPE	23P26	23P21	23~~P~~27 N
Dept, Matrix, Prod	3 SE AVS	3 SE AVS	3 SE AVS
	3 SE PH	3 SE PH	3 SE PH
	3 SE PSD	3 SE PSD	3 SE PSD
	3 SE TOC	3 SE TOC	3 SE TOC
	3 SE TOTS	3 SE TOTS	3 SE TOTS
	6 SE HG-CVAA-M	6 SE HG-CVAA-M	6 SE HG-CVAA-M
	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT	6 SE HG-SEM, EXT
	6 SE NPDES ICPMS	6 SE NPDES ICPMS	6 SE NPDES ICPMS
	6 SE P-ICPMS	6 SE P-ICPMS	6 SE P-ICPMS
	6 SE SEM ICP	6 SE SEM ICP	6 SE SEM ICP
	7 SE BNALLFULL	7 SE BNALLFULL	7 SE BNALLFULL
	7 SE CLPEST	7 SE CLPEST	7 SE CLPEST
	7 SE EDC	7 SE EDC	7 SE EDC
	7 SE PBDE	7 SE PBDE	7 SE PBDE
	7 SE PCB	7 SE PCB	7 SE PCB
	~20 SPOONS SILT SAND BROWN H2S SLIGHT W/P JUST D.S. OF CULVERT	~15 SPOONS SILT SAND >50/50 BROWN NAT OD OR W/P JUST US OF ROAD	SILT SAND BROWN NO DEBRIS H2S MOD UNDER ROAD BRIDGE ~20 SPOONS FLOCY FINE MATERIAL

Login: P56024 Green River Trib Seds- August Version Personnel: _____

Project: 423589-330-4

X NOT COLLECTED

Sample Number	P56024-29	P56024-30	P56024-31
QC Link			
Locator	JK320	FR320	DT320
Short Loc Desc	JENK516	Jenkins 4	Jenkins 5
Locator Desc	JENKLINS CREEK DOWNSTREAM OF KENT KANGLEY RD	JENKINS CRK AT FRONTAGE RD AND HWY 18	JENKINS CRK DOT PROP NEAR 200TH AND HWY18
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	27-AUG-12/1025	27-AUG-12/1230	
End Date/Time	SH/JP	SH/JP	
Time Span			
Sample Depth			
SAMP INFO	20 SPOONS D.S. OF ROAD BRIDGE	20 SPOONS	
SED DEPTH	3-8 CM	3-5 CM	
SED TYPE	23 ~~P21~~ N EXH	23P21	
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB + EXTRA PSD CONTAINER	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB
	SILT SAND BROWN NO DEBRIS NAT. ODOR ~20 SPOONS D.S. OF ROAD BRIDGE	SILT SAND BROWN NAT. ODOR W/P DEBRIS 20 SPOONS	ATTEMPTED 8/27 NOT ACCESSIBLE TOTALLY OVERGROWN RE-ATTEMPT 8/29 ESSENTIALLY DRY

Login: P56024 Green River Trib Seds- August Version Personnel: JP + SH/JP

Project: 423589-330-4

Sample Number	P56024-33	P56024-34	P56024-35
QC Link			
Locator	LW320	FL319	0318
Short Loc Desc	Jenkins7	FL319	
Locator Desc	JENKINS LK. WILDERNESS 224TH AVE	GREEN RIVER, DOWNSTREAM OF CONFLUENCE WITH BL	GREEN RIVER/EAST VALLEY HWY BRDG/EAST VALLEY
Site	STREAMS	STREAMS	STREAMS
Comments			
Start Date/Time	27-AUG-12/1145	29-AUG-12/1010	29-AUG-12/1240
End Date/Time	SH/JP	JP	JP
Time Span			
Sample Depth			
SAMP INFO	20 SPOONS, D.S. OF ROAD, STRANGE ODOR	3 PONAR CASTS ALL SAND	20 SPOONS, U.S. OF BRIDGE, DEEP + ROCKY
SED DEPTH	3-8 cm	3-8 cm	3-8 cm
SED TYPE	2ØP21	3ØP2Ø	32P2Ø
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB 10 SE EPA1613BDIOXIN	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB

SILT
NO 2ND
BROWN
ODD SMELL
W/P DEBRIS
~20 SPOONS
D.S. OF ROAD
STAGNANT

SAND
NO 2ND
BROWN
W/P
NO ODOR

3 PONAR
CASTS
3-8 cm

SAND
SILT
BROWN
W/P
NO ODOR
~20 SPOONS

JUST U.S.
OF ~~RO~~ ROAD
BRIDGE
DEEP, FAIRLY
FAST CURRENT-
ROCKY

P56024-3

FR 315

MILL & FRONTAGE RD.

29-AUG-12 / 1130

AT SOUTH END OF D.O.T. BARBED WIRE FENCE — SMALL AREA OF DRY GROUND TO ACCESS EDGE OF POOLED-UP "CREEK."

~30 SPOONS

MUCH CANARY GRASS, ~~STRKS~~, STICKS, LEAVES, ETC.

SILT

SAND

BROWN

W2S MOD

W/P DEBRIS

3-8 CM

Login: P56024 Green River Trib Seds- August Version Personnel: JD

Project: 423589-330-4

CHAIN OF CUSTODY
RELINQUISHED BY: 8/24/12 1645
RECEIVED BY: 8/24/12 1645
Sample Number: 56024 37, 38, 39

Sample Number	P56024-36	P56024-37	P56024-38
QC Link			
Locator	A319	FG319	0320
Short Loc Desc	GREEN RIV	FG319	SOOS CR
Locator Desc	GREEN RIVER/ABOVE SOOS CR/BRIDGE ON AUBURN-BL	GREEN RIVER, FLAMING GEYSER SP, UPSTREAM OF N	BIG SOOS CREEK//FOOTBRIDGE AT HATCHERY NEAR M
Site	STREAMS	STREAMS	STREAMS
Comments	27-AUG-12 1325		
Start Date/Time	~~8/14/12 1211~~ JP	8/14/12 1200	8/14/12 1050
End Date/Time		1240	8/14/12 1100
Time Span			
Sample Depth			
SAMP INFO	25 SPOONS	25 SPOONS U.S. OF BRIDGE	~~15~~ 14 SPOONS NOT MANY FINES
SED DEPTH	3-5 cm	3-5 cm	5-10 cm
SED TYPE	32P2Ø	32P2Ø	23P2Ø
Dept, Matrix, Prod	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB	3 SE AVS 3 SE PH 3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 7 SE BNASMS 7 SE CLPEST 7 SE EDC 7 SE PCB 10 SE EPA1613BDIOXIN	3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 10 SE EPA1613BDIOXIN Sampled right bank downstream of bridge downstream of hatchery 14 spoonfuls trying to get fines & as little sand as possible
	SAND SILT BROWN NO ODOR W/P DEBRIS ~25 SPOONS	SAND SILT BROWN NO ODOR TWIGS/leaves Used spoon - lots of spoonfuls Sampled under upstream side of bridge, right bank flow ~ 0.4'/sec	silt sand twigs no odor brown water depth ~ 0.5'

Project: 423589-330-4

Sample Number	P56024-39	P56024-40	
QC Link			
Locator	X322	0317	
Short Loc Desc	NEWK MOUTH	SPRBR CR	
Locator Desc	NEWAUKUM CREEK NEAR THE MOUTH OFF OF 358TH SE	SPRINGBROOK CREEK//BRIDGE AT N END OF LONGACR	
Site	STREAMS	STREAMS	
Comments			
Start Date/Time	8/14/12 1135	13-AUG-12/1040	
End Date/Time	8/14/12 1145		
Time Span	JD	JP	
Sample Depth			
SAMP INFO	16 SPOONS	7 CORE TUBE GRABS UNDER BRIDGE H2S SLIGHT	
SED DEPTH	3-7 cm	5-10 cm	
SED TYPE	24P20	23P2.6	
Dept, Matrix, Prod	3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 10 SE EPA1613BDIOXIN	3 SE PSD 3 SE TOC 3 SE TOTS 6 SE HG-CVAA-M 6 SE HG-SEM, EXT 6 SE NPDES ICPMS 6 SE P-ICPMS 6 SE SEM ICP 10 SE EPA1613BDIOXIN	
	X site found lots of fines in gravel on left bank silt Brown no odor small sticks could not use tube due to rocks used ~16 spoonfuls	SILT SAND BROWN H2S SLIGHT WOOD / STICKS 7 CORE TUBE GRABS	

8/27/2012 SH/JP

JENKINS CREEK - 28?

WX320 1000

SILT
SAND
BROWN
NO DEBRIS
H2S MOD

UNDER ROAD BRIDGE
~20 SPOONS
VERY FINE MATERIAL

JK320 1025 - -29

SILT
SAND
BROWN
NO DEBRIS
~~H2S~~ NAT ODOR

D.S. OF ROAD BRIDGE
~20 SPOONS
3-8 cm

JT320
COULD NOT ACCESS
COMPLETELY OVERGROWN

LW320 1145

SILT
NO SECOND
BROWN
ODD SMELL
W/P DEBRIS

~20 SPOONS
D.S. SIDE OF ROAD
NEARLY STAGNANT

8/29/12 – CONT. PH / JP

JENKINS

12, 28, 29, 30, 33, 36

FR 320 ~~E~~ 1230

SILT
SAND
BROWN
NAT ODOR
W/P DEBRIS
EXTRA CONTAINER FOR PSD
~25 SPOONS
3 Ø-5 cm

GREEN RIVER

A319 1325

SAND
SILT
BROWN
NO ODOR
W/P DEBRIS
~25 SPOONS
3-5 cm

EMILL DT318 1420

SILT (MOSTLY)
SAND
BROWN / GREEN
STRANGE ODOR
W/P DEBRIS
~20 SPOONS
3-8 cm