APPENDIX Z GROUNDWATER QUALITY PARAMETERS

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-4S	MW-4S	MW-4S	MW-4S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S
Date		3/3/2014	8/28/2014	4/1/2015	9/2/2015	4/18/1996	3/25/2009	4/29/2010	10/27/2010	4/28/2011	12/1/2011
Sample ID		MW-4S-030314	MW-4S-082814	MW-4S-040115	MW-4S-090215	MW-5S:041896	MW-05S-032509	MW-05S-042910	MW-05S-102710	MW-5S-042811	MW-5S-120111
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	B	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L		< 50 U				**60.3** J	< 77.1 U	< 31.0 U		
Dissolved Aluminum	µg/L						**128** j	**51.8** j	< 31.0 U		
Total Calcium	µg/L		**49000**				**20200**	**32700**	**27700**		
Total Iron	µg/L		**150**				**52.6** j	**24.2** j	< 29.9 U		
Dissolved Iron	µg/L						**17.1** J	**29.6** j	**32.8** j		
Total Magnesium	µg/L		**1990**				**3530** N	**3050** j	**2960** j		
Total Manganese	µg/L		**74**				**27.6**	**14.6** j	**19.9**		
Dissolved Manganese	µg/L						**25.8**	**22.2**	**18.7**		
Total Potassium	µg/L		**2390**				**435** j	**1090** j	**1160** j		
Total Sodium	µg/L		**8230**				**10200**	**7710**	**8440**		
Nitrate as N	mg/L					**0.13**	< 0.055 U	< 0.055 U	**0.031** j		
Nitrite as N	mg/L					< 0.05 U	< 0.017 U				
Ammonia as N	mg/L					**0.04**					
Chloride	mg/L						**7.2**	**3.8**	**4.6**		
Sulfate	mg/L					**18**	**30**	**55.5**	**38.2**		
Sulfide	mg/L					< 2 U					
Total Alkalinity as CaCO3	mg/L						**45**				
Bicarbonate Alkalinity as CaCO3	mg/L						**45**	**60.0**	**60.7**		
Carbonate Alkalinity as CaCO3	mg/L						< 8 U	< 2.0 U	< 2.0 U		
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L					< 0.05 U	< 0.33 UJ	**0.018**	**0.024** J		
Hardness as CaCO3	mg/L		**130**				**60**	**94.2**	**81.4**		
Total Suspended Solids	mg/L						< 2 U	< 2.0 U	< 2.0 U		
Total Organic Carbon (TOC)	mg/L						**0.69** j	**1.2**	**2.1**		
Total Organic Halides (TOX)	µg/L						**6** j	< 4 U	< 4 U		
Chemical Oxygen Demand (COD)	mg/L					**12**					
Field Parameters											
Ferrous Iron (Field Measured)	mg/L						**0**	**0**	**0**	**0.05**	**0**
Sulfide (Field Measured)	mg/L						**0.02**	**0**	**0.03**	**0**	**0**
Temperature	deg C	**9.11**	**15.73**	**10.07**	**19.9**		**8.05**	**12.01**	**14.20**	**11.57**	**9.24**
pH	pH units	**6.44**	**6.63**	**6.56**	**6.45**						
pH (Field Measured)	pH units	**6.34**	**6.97**	**7.76**	**6.45**	**6.00**	**7.56**	**6.01**	**5.63**	**6.03**	**5.86**
Electrical Conductivity (Field Measured)	µS/cm	**289**	**334**	**181**	**400**		**167**	**266**	**182**	**231**	**183**
Electrical Conductivity	umhos/cm	**267**	**303**	**302**	**354**						
Dissolved Oxygen	mg/L	**5.05**	**0.50**	**1.65**	**1.79**	**0.59**	**2.41**	**0.33**	**0.58**	**0.54**	**1.22**
Oxidation-Reduction Potential	mV	**246**	**-4**	**76**	**65.5**	**90**	**-46.8**	**100.7**	**172.1**	**77**	**147**
Salinity	‰	**0.10**	**0.10**	**0.10**	**0.20**						
Salinity (Field Measured)	‰	**0.1**	**0.2**	**0.1**	**0.19**		**0.08**	**0.17**	**0.11**	**0.1**	**0.1**
Turbidity	NTU	**0.29**	**0.75**	**0.22**	**1.15**		**0.43**	**0.44**	**0.6**	**0**	**1.2**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-6S	MW-6S	MW-6S	MW-6S	MW-6S
Date		5/1/2012	3/3/2014	8/25/2014	3/30/2015	8/31/2015	4/18/1996	4/18/1996	3/25/2009	4/29/2010	10/27/2010
Sample ID		MW-5S-050112	MW-5S-030314	MW-5S-082514	MW-5S-033015	MW-5S-083115	MW-10S:041896	MW-6S:041896	MW-06S-032509	MW-06S-042910	MW-06S-102710
Sample Type		N	N	N	N	N	FD	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	B	B	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L								**43.2** J	< 77.1 U	< 31.0 U
Dissolved Aluminum	µg/L								**60.8** j	< 22.3 U	< 31.0 U
Total Calcium	µg/L								**57800**	**45400**	**59000**
Total Iron	µg/L								**844**	**1150**	**940**
Dissolved Iron	µg/L								**767** J	**1060**	**836**
Total Magnesium	µg/L								**5920** N	**4500** j	**7760**
Total Manganese	µg/L								**19.2**	**26.6**	**50.8**
Dissolved Manganese	µg/L								**19**	**26.8**	**43.1**
Total Potassium	µg/L								**13800**	**12000**	**14200**
Total Sodium	µg/L								**11500**	**23500**	**30200**
Nitrate as N	mg/L						< 0.05 U	< 0.05 U	< 0.055 U	< 0.055 U	< 0.030 U
Nitrite as N	mg/L						< 0.05 U	< 0.05 U	< 0.017 U		
Ammonia as N	mg/L						**0.63**	**0.59**			
Chloride	mg/L								**5.4**	**3.0**	**3.9**
Sulfate	mg/L						**62**	**62**	**24**	**25.2**	**42.3**
Sulfide	mg/L						< 2 U	< 2 U			
Total Alkalinity as CaCO3	mg/L								**240**		
Bicarbonate Alkalinity as CaCO3	mg/L								**240**	**196**	**217**
Carbonate Alkalinity as CaCO3	mg/L								< 8 U	< 2.0 U	< 2.0 U
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L						< 0.05 U	< 0.05 U	< 0.33 UJ	**0.081**	**0.11** J
Hardness as CaCO3	mg/L								**150**	**132**	**179**
Total Suspended Solids	mg/L								< 2 U	< 2.0 U	**3.0**
Total Organic Carbon (TOC)	mg/L								**1.2**	**1.5**	**2.5**
Total Organic Halides (TOX)	µg/L								**10**	< 4 U	
Chemical Oxygen Demand (COD)	mg/L						**13**	**14**			
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**0.20**							**0.56**	**0.98**	**0.44**
Sulfide (Field Measured)	mg/L	**0**							**0**	**0.02**	**0.05**
Temperature	deg C	**9.05**	**9.26**	**23.51**	**12.89**	**16.47**			**8.83**	**12.45**	**16.15**
pH	pH units		**5.93**	**6.16**	**6.20**	**5.87**					
pH (Field Measured)	pH units	**6.02**	**5.35**	**5.88**	**6.29**	**5.61**		**6.14**	**8.93**	**6.51**	**5.99**
Electrical Conductivity (Field Measured)	µS/cm	**159**	**165**	**238**	**194**	**245**			**464**	**442**	**428**
Electrical Conductivity	umhos/cm		**147**	**269**	**180**	**204**					
Dissolved Oxygen	mg/L	**0.64**	**2.8**	**0.45**	**0**	**0.48**		**0.88**	**2.39**	**0.26**	**0.69**
Oxidation-Reduction Potential	mV	**181**	**282**	**53**	**-55**	**57.9**		**-15**	**-150.2**	**-86.1**	**16.6**
Salinity	‰		**0.10**	**0.10**	**0.10**	**0.10**					
Salinity (Field Measured)	‰	**0.1**	**0.1**	**0.1**	**0.1**	**0.12**			**0.23**	**0.29**	**0.25**
Turbidity	NTU	**3.97**	**0.35**	**0.23**	**0.42**	**0.81**			**1.07**	**1.64**	**1.7**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-6S	MW-6S	MW-6S	MW-6S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S
Date		10/27/2010	4/27/2011	11/30/2011	4/26/2012	4/18/1996	3/25/2009	4/27/2010	6/2/2010	10/25/2010	4/26/2011
Sample ID		MW-6S-102710	MW-6S-042711	MW-6S-113011	MW-6S-042612	MW-7S:041896	MW-07S-032509	MW-07S-042710	MW-07S-060210	MW-07S-102510	MW-07S-042611
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	B	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L						**65.8** J	< 77.1 U		< 31.0 U	
Dissolved Aluminum	µg/L						**82.2** j	< 22.3 U		< 31.0 U	
Total Calcium	µg/L						**70200**	**97000**		**58200**	
Total Iron	µg/L						**5330**	**5340**		**2210**	
Dissolved Iron	µg/L						**5370** J	**4940**		**2210**	
Total Magnesium	µg/L						**5900** N	**6900**		**4770** j	
Total Manganese	µg/L						**199**	**226**		**254**	
Dissolved Manganese	µg/L						**200**	**228**		**297**	
Total Potassium	µg/L						**3380** j	**4760** j		**4280** j	
Total Sodium	µg/L						**19400**	**22300**		**13200**	
Nitrate as N	mg/L					< 0.05 U	< 0.055 U	< 0.055 U		< 0.030 U	
Nitrite as N	mg/L					< 0.05 U	< 0.017 U				
Ammonia as N	mg/L					**0.29**					
Chloride	mg/L						**7.7**	**34.0**		**4.6**	
Sulfate	mg/L					**32**	**53**	**122**		**49.4**	
Sulfide	mg/L					< 2 U					
Total Alkalinity as CaCO3	mg/L						**170**				
Bicarbonate Alkalinity as CaCO3	mg/L						**170**	**196**		**157**	
Carbonate Alkalinity as CaCO3	mg/L						< 8 U	< 2.0 U		< 2.0 U	
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L					< 0.05 U	< 0.33 UJ	**0.22**		**0.25**	
Hardness as CaCO3	mg/L						**170**	**271**		**165**	
Total Suspended Solids	mg/L						**5**	**2.0**		< 2.0 U	< 1.0 U
Total Organic Carbon (TOC)	mg/L						**1.7**	**2.9** J		**2.8**	
Total Organic Halides (TOX)	µg/L	< 4 U					**55**	**29**			
Chemical Oxygen Demand (COD)	mg/L					**12**					
Field Parameters											
Ferrous Iron (Field Measured)	mg/L		**0.32**	**0.16**	**0.20**		**2.34**	**2.44**	**2.05**	**2.09**	**2.12**
Sulfide (Field Measured)	mg/L		**0.17**	**0.04**	**0.07**		**0.24**	**0.14**	**0.01**	**0.04**	**0.08**
Temperature	deg C		**10.12**	**10.62**	**13.97**		**8.49**	**11.15**	**13.27**	**14.05**	**9.73**
pH	pH units										
pH (Field Measured)	pH units		**6.63**	**6.16**	**5.73**	**5.6**	**8.72**	**6.26**	**6.46**		**6.25**
Electrical Conductivity (Field Measured)	µS/cm		**457**	**607**	**476**		**505**	**738**	**640**	**378**	**528**
Electrical Conductivity	umhos/cm										
Dissolved Oxygen	mg/L		**0.97**	**0.97**	**0.51**	**0.72**	**2.63**	**0.41**	**0.57**	**1.70**	**0.58**
Oxidation-Reduction Potential	mV		**4**	**22**	**5**	**-57**	**-159.5**	**-151.9**	**-161.6**	**-184.8**	**-15**
Salinity	‰										
Salinity (Field Measured)	‰		**0.2**	**0.3**	**0.2**		**0.24**	**0.50**	**0.31**	**0.23**	**0.3**
Turbidity	NTU		**1.2**	**8.0**	**3.18**		**1.30**	**1.89**	**0.77**	**1.4**	**0**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-7S	MW-7S	MW-7S	MW-10S	MW-10S	MW-10S	MW-10S	MW-10S	MW-10S	MW-11S
Date		7/14/2011	11/29/2011	4/27/2012	3/24/2009	4/28/2010	10/25/2010	4/26/2011	11/29/2011	4/27/2012	3/25/2009
Sample ID		MW-07S-071411	MW-7S-112911	MW-7S-042712	MW-10-032409	MW-10-042810	MW-10-102610	MW-10-042611	MW-10-112911	MW-10-042712	MW-11-032509
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L					< 77.1 U	< 31.0 U				**84.5** J
Dissolved Aluminum	µg/L					< 22.3 U	< 31.0 U				**99.1** j
Total Calcium	µg/L					**56600**	**81300**				**58200**
Total Iron	µg/L					**470**	**217**				**83.2** j
Dissolved Iron	µg/L					**428**	**248**				**51.5** J
Total Magnesium	µg/L					**1630** j	**2320** j				**2980** N
Total Manganese	µg/L					**38.1**	**57.3**				**45.2**
Dissolved Manganese	µg/L					**35.8**	**63.7**				**46.8**
Total Potassium	µg/L					**2240** j	**1740** j				**2840** j
Total Sodium	µg/L					**6340**	**8480**				**47900**
Nitrate as N	mg/L				< 0.055 U	< 0.055 U	< 0.030 U				< 0.055 U
Nitrite as N	mg/L				< 0.017 UJ						< 0.017 U
Ammonia as N	mg/L										
Chloride	mg/L				**8.1** J	**2.3**	**3.9**				**9.2**
Sulfate	mg/L				**27**	**23.6**	**30.6**				**11**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L				**190**						**230**
Bicarbonate Alkalinity as CaCO3	mg/L				**190**	**144**	**193**				**230**
Carbonate Alkalinity as CaCO3	mg/L				< 8 U	< 2.0 U	< 2.0 U				< 8 U
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L				< 0.33 U	**0.035**	< 0.010 U				< 0.33 UJ
Hardness as CaCO3	mg/L				**180**	**148**	**213**				**140**
Total Suspended Solids	mg/L		**6.6**	**1.4**	< 2 U	< 2.0 U	**1.0** j	< 1.0 U	< 1.1 U	< 1.1 U	< 2 U
Total Organic Carbon (TOC)	mg/L				**2.1**	**3.6**	**3.3**				**2**
Total Organic Halides (TOX)	µg/L				**11**	**9** j	**9** j				**14**
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**1.85**	**4.25**	**1.40**	**0.64**	**0.95**	**0.23**	**0.10**	**0.35**	**0.45**	**0**
Sulfide (Field Measured)	mg/L	**0.03**	**0.07**	**0.21**	**0.08**	**0.55**	**0.56**	**0.03**	**0.39**	**0.26**	**0.03**
Temperature	deg C	**15.00**	**10.86**	**13.83**	**8.42**	**10.66**	**11.97**	**10.02**	**8.08**	**19.18**	**9.38**
pH	pH units										
pH (Field Measured)	pH units	**6.78**	**6.42**	**5.69**	**8.06**	**6.66**	**7.19**	**6.84**	**7.27**	**6.38**	**8.60**
Electrical Conductivity (Field Measured)	µS/cm	**370**	**598**	**496**	**425**	**392**	**358**	**379**	**352**	**338**	**414**
Electrical Conductivity	umhos/cm										
Dissolved Oxygen	mg/L	**0.36**	**1.49**	**0.60**	**2.19**	**0.34**	**1.21**	**5.29**	**1.34**	**0.53**	**1.95**
Oxidation-Reduction Potential	mV	**34**	**-21**	**6**	**-64.9**	**-181.0**	**-288.0**	**-16**	**-76**	**-45**	**-112.0**
Salinity	‰										
Salinity (Field Measured)	‰	**0**	**0.3**	**0.2**	**0.21**	**0.26**	**0.23**	**0.2**	**0.2**	**0.2**	**0.20**
Turbidity	NTU	**1.9**	**1.0**	**2.46**	**1.06**	**1.02**	**2.2**	**0**	**0.9**	**3.15**	**0.38**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-12S	MW-12S	MW-12S	MW-12S	MW-12S
Date		4/30/2010	10/28/2010	4/28/2011	12/1/2011	5/1/2012	3/25/2009	4/30/2010	10/28/2010	4/28/2011	12/1/2011
Sample ID		MW-11-043010	MW-11-102810	MW-11-042811	MW-11-120111	MW-11-050112	MW-12-032509	MW-12-043010	MW-12-102810	MW-12-042811	MW-12-120111
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	< 77.1 U	< 31.0 U				**94.8** J	**78.7** j	< 31.0 U		
Dissolved Aluminum	µg/L	< 22.3 U	< 31.0 U				**68.9** j	**47.3** j	< 31.0 U		
Total Calcium	µg/L	**38400**	**51000**				**21400**	**15700**	**35600**		
Total Iron	µg/L	**41** j	< 29.9 U				**3630**	**847**	**2310**		
Dissolved Iron	µg/L	< 13.1 U	< 29.9 U				**3710** J	**662**	**2150**		
Total Magnesium	µg/L	**1340** j	**1790** j				**3190** N	**1330** j	**3740** j		
Total Manganese	µg/L	**7.7** j	**25.2**				**113**	**23.9**	**65.3**		
Dissolved Manganese	µg/L	**0.55** j	**26.1**				**137**	**24.1**	**63.2**		
Total Potassium	µg/L	**1120** j	**1410** j				**3700** j	**2850** j	**4190** j		
Total Sodium	µg/L	**11700**	**12700**				**53900**	**33600**	**36600**		
Nitrate as N	mg/L	< 0.055 U	< 0.030 U				< 0.055 U	< 0.055 U	< 0.030 U		
Nitrite as N	mg/L						**0.52** J				
Ammonia as N	mg/L										
Chloride	mg/L	**2.9**	**4.8**				**15**	**8.9**	**13.6**		
Sulfate	mg/L	**18.3**	**20.9**				**20**	**21.7**	**44.7**		
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L						**140**				
Bicarbonate Alkalinity as CaCO3	mg/L	**124**	**149**				**140**	**100**	**120**		
Carbonate Alkalinity as CaCO3	mg/L	< 2.0 U	< 2.0 U				< 8 U	< 2.0 U	< 2.0 U		
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L	**0.12**	**0.068** J				< 0.33 UJ	**0.44**	**0.75**		
Hardness as CaCO3	mg/L	**101**	**135**				**60**	**44.7**	**104**		
Total Suspended Solids	mg/L	< 2.0 U	**2.0**				**2**	**2.0**	**2.0**		
Total Organic Carbon (TOC)	mg/L	**2.5**	**3.5**				**1.9**	**2.1**	**2.0**		
Total Organic Halides (TOX)	µg/L	**10**	**9** j				**9** j	**5** j	**5** j		
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**0**	**0**	**0**	**0.11**	**0.03**	**3.30**	**0.34**	**1.32**	**0.82**	**1.94**
Sulfide (Field Measured)	mg/L	**0.15**	**0.07**	**0.01**	**0.03**	**0.01**	**0.03**	**0**	**0.07**	**0**	**0**
Temperature	deg C	**11.51**	**13.09**	**11.33**	**9.20**	**10.70**	**9.46**	**11.20**	**15.51**	**10.85**	**10.61**
pH	pH units										
pH (Field Measured)	pH units	**6.65**	**6.33**	**7.09**	**6.45**	**6.74**	**8.06**	**5.41**	**5.81**	**5.71**	**5.76**
Electrical Conductivity (Field Measured)	µS/cm	**244**	**243**	**234**	**287**	**320**	**331**	**190**	**256**	**206**	**361**
Electrical Conductivity	umhos/cm										
Dissolved Oxygen	mg/L	**1.95**	**6.60**	**2.49**	**11.17**	**0.72**	**1.40**	**0.60**	**0.43**	**0.52**	**1.30**
Oxidation-Reduction Potential	mV	**150.6**	**68.9**	**50**	**135**	**143**	**-45.5**	**172.2**	**96.1**	**141**	**105**
Salinity	‰										
Salinity (Field Measured)	‰	**0.16**	**0.15**	**0.1**	**0.1**	**0.2**	**0.16**	**0.12**	**0.15**	**0.1**	**0.2**
Turbidity	NTU	**1.42**	**1.0**	**0.6**	**2.4**	**4.12**	**3.54**	**3.18**	**8.6**	**1.2**	**2.6**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-12S	MW-12S	MW-12S	MW-12S	MW-12S	MW-13S	MW-13S	MW-13S	MW-13S	MW-13S
Date		5/1/2012	3/3/2014	8/25/2014	3/30/2015	8/31/2015	3/24/2009	4/28/2010	6/2/2010	10/25/2010	4/26/2011
Sample ID		MW-12-050112	MW-12S-030314	MW-12S-082514	MW-12S-033015	MW-12S-083115	MW-13-032409	MW-13-042810	MW-13-060210	MW-13-102610	MW-13-042611
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L						**174** j	< 77.1 U		< 31.0 U	
Dissolved Aluminum	µg/L						**107** j	< 22.3 U		< 31.0 U	
Total Calcium	µg/L						**88300**	**146000**		**182000**	
Total Iron	µg/L						**1550**	**857**		**1340**	
Dissolved Iron	µg/L						**1520**	**803**		**1480**	
Total Magnesium	µg/L						**3010**	**6470**		**8090**	
Total Manganese	µg/L						**137**	**217**		**142**	
Dissolved Manganese	µg/L						**149**	**211**		**148**	
Total Potassium	µg/L						**5020**	**3820** j		**3270** j	
Total Sodium	µg/L						**36600** J	**17800**		**11800**	
Nitrate as N	mg/L						< 0.055 U	< 0.055 U		< 0.030 U	
Nitrite as N	mg/L						< 0.017 UJ				
Ammonia as N	mg/L										
Chloride	mg/L						**10** J	**2.8**		**3.1**	
Sulfate	mg/L						**26**	**41.5**		**55.1**	
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L						**240**				
Bicarbonate Alkalinity as CaCO3	mg/L						**240**	**416**		**533**	
Carbonate Alkalinity as CaCO3	mg/L						< 8 U	< 2.0 U		< 2.0 U	
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L						< 0.33 U	**0.27**		**0.23**	
Hardness as CaCO3	mg/L						**190**	**392**		**487**	
Total Suspended Solids	mg/L						< 2 U	**5.0**		**5.0**	< 1.0 U
Total Organic Carbon (TOC)	mg/L						**8.9**	**13.9**		**7.4**	
Total Organic Halides (TOX)	µg/L						**59**	**115**		**12**	
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**0.35**					**1.05**	**0.70**	**1.35**	**1.02**	**1.23**
Sulfide (Field Measured)	mg/L	**0**					**0.01**	**0.01**	**0.01**	**0.11**	**0.02**
Temperature	deg C	**10.95**	**9.03**	**19.21**	**14.25**	**18.5**	**9.61**	**14.59**	**13.88**	**13.43**	**11.87**
pH	pH units		**6.24**	**6.20**	**6.06**	**6.31**					
pH (Field Measured)	pH units	**5.63**	**6**	**6.00**	**5.89**	**6.31**	**7.37**	**6.20**	**6.41**	**6.47**	**6.24**
Electrical Conductivity (Field Measured)	µS/cm	**229**	**307**	**495**	**302**	**447**	**524**	**1048**	**951**	**945**	**566**
Electrical Conductivity	umhos/cm		**272**	**448**	**307**	**464**					
Dissolved Oxygen	mg/L	**1.00**	**3.02**	**0**	**0**	**0.65**	**1.83**	**0.37**	**0.36**	**3.53**	**0.49**
Oxidation-Reduction Potential	mV	**184**	**245**	**-48**	**-5**	**-80.8**	**-39.6**	**-1.5**	**-116.1**	**-262.0**	**53**
Salinity	‰		**0.10**	**0.20**	**0.10**	**0.20**					
Salinity (Field Measured)	‰	**0.1**	**0.1**	**0.2**	**0.1**	**0.22**	**0.25**	**0.66**	**0.47**	**0.62**	**0.3**
Turbidity	NTU	**4.20**	**0.42**	**1.78**	**0.61**	**0.7**	**1.09**	**3.39**	**1.41**	**2.7**	**2.9**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-13S	MW-13S	MW-13S	MW-13S	MW-13S	MW-13S	MW-13S	MW-14S	MW-14S	MW-14S
Date		7/14/2011	11/29/2011	4/30/2012	3/7/2014	8/25/2014	3/30/2015	8/31/2015	3/25/2009	4/29/2010	10/27/2010
Sample ID		MW-13-071411	MW-13-112911	MW-13-043012	MW-13S-030714	MW-13S-082514	MW-13S-033015	MW-13S-083115	MW-14-032509	MW-14-042910	MW-14-102710
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L								**113** J	< 77.1 U	< 31.0 U
Dissolved Aluminum	µg/L								**55.2** j	< 22.3 U	< 31.0 U
Total Calcium	µg/L								**45200**	**46300**	**52400**
Total Iron	µg/L								**9820**	**15200**	**17600**
Dissolved Iron	µg/L								**9680** J	**14300**	**16200**
Total Magnesium	µg/L								**8200** N	**9220**	**10700**
Total Manganese	µg/L								**368**	**456**	**562**
Dissolved Manganese	µg/L								**368**	**430**	**530**
Total Potassium	µg/L								**7210**	**8260**	**10300**
Total Sodium	µg/L								**41100**	**45400**	**50200**
Nitrate as N	mg/L								< 0.055 U	< 0.055 U	< 0.030 U
Nitrite as N	mg/L								< 0.017 U		
Ammonia as N	mg/L										
Chloride	mg/L								**11**	**13.9**	**11.0**
Sulfate	mg/L								**24**	**32.9**	**60.3**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L								**190**		
Bicarbonate Alkalinity as CaCO3	mg/L								**190**	**226**	**222**
Carbonate Alkalinity as CaCO3	mg/L								< 8 U	< 2.0 U	< 2.0 U
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L								< 0.33 UJ	**0.53**	**0.99** J
Hardness as CaCO3	mg/L								**120**	**154**	**175**
Total Suspended Solids	mg/L		**3.3**	**1.5**					**15**	**9.0**	**20.0**
Total Organic Carbon (TOC)	mg/L								**2.3**	**4.3**	**4.6**
Total Organic Halides (TOX)	µg/L								**9** j	< 4 U	**6** j
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**2.97**	**1.73**	**1.90**					**3.14**	**1.98**	
Sulfide (Field Measured)	mg/L	**0.04**	**0.04**	**0.06**					**0**	**0.02**	
Temperature	deg C	**14.70**	**10.36**	**10.99**	**12.07**	**18.92**	**14.53**	**17.36**	**10.37**	**11.68**	**15.68**
pH	pH units				**6.31**	**6.02**	**6.33**	**6.22**			
pH (Field Measured)	pH units	**6.58**	**6.31**	**5.73**	**6.17**	**5.85**	**6.37**	**6.17**	**8.84**	**6.46**	**6.15**
Electrical Conductivity (Field Measured)	µS/cm	**705**	**869**	**802**	**984**	**450**	**713**	**690**	**444**	**581**	**536**
Electrical Conductivity	umhos/cm				**806**	**395**	**656**	**648**			
Dissolved Oxygen	mg/L	**0.29**	**1.08**	**0.84**	**1.74**	**0**	**0**	**0.47**	**1.82**	**0.36**	**0.65**
Oxidation-Reduction Potential	mV	**38**	**-14**	**-35**	**14**	**-45**	**-76**	**-66.9**	**-130.6**	**-94.7**	**-56.2**
Salinity	‰				**0.40**	**0.20**	**0.30**	**0.30**			
Salinity (Field Measured)	‰	**0**	**0.4**	**0.4**	**0.5**	**0.2**	**0.3**	**0.34**	**0.22**	**0.38**	**0.32**
Turbidity	NTU	**4.7**	**1.0**	**4.32**	**2.41**	**4.66**	**1.41**	**1.71**	**2.12**	**8.22**	**1.1**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-14S	MW-14S	MW-14S	MW-14S	MW-14S	MW-14S	MW-14S	MW-14S	MW-14S	MW-14S
Date		4/27/2011	7/14/2011	12/2/2011	4/30/2012	3/7/2014	8/29/2014	8/29/2014	4/3/2015	4/3/2015	9/3/2015
Sample ID		MW-14-042711	MW-14-071411	MW-14-120211	MW-14-043012	MW-14S-030714	MW-14S-082914	DUP-082914-01	DUP-040315-01	MW-14S-040315	MW-14S-090315
Sample Type		N	N	N	N	N	N	FD	FD	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L					< 50 U	< 50 U		< 50 U	< 50 U	< 5 U
Dissolved Aluminum	µg/L										
Total Calcium	µg/L					**34600**	**40900**		**55300**	**55000**	**53000**
Total Iron	µg/L					**8660**	**10700**		**12700**	**12400**	**12700**
Dissolved Iron	µg/L										
Total Magnesium	µg/L					**4890**	**5590**		**8160**	**8110**	**6980**
Total Manganese	µg/L					**248**	**383**		**368**	**354**	**453**
Dissolved Manganese	µg/L										
Total Potassium	µg/L					**8290**	**10700**		**10800**	**10600**	**12000**
Total Sodium	µg/L					**41100**	**33000**		**57300**	**58100**	**31000**
Nitrate as N	mg/L					< 0.1 U	< 0.1 U			< 0.1 U	< 0.007 U
Nitrite as N	mg/L										
Ammonia as N	mg/L										
Chloride	mg/L					**8.2**	**7.8**			**12.5**	**10.9**
Sulfate	mg/L					**25.1**	**14.2**			**18.6**	**17.1**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L					**188**	**182**			**282**	**218**
Bicarbonate Alkalinity as CaCO3	mg/L					**188**	**182**			**282**	**218**
Carbonate Alkalinity as CaCO3	mg/L					< 1.0 U	< 1.0 U			< 1.0 U	< 1.0 U
Hydroxide as CaCO3	mg/L					< 1.0 U	< 1.0 U			< 1.0 U	< 1.0 U
Phosphorus	mg/L					**2.42**	**2.11**			**5.96**	**1.94**
Hardness as CaCO3	mg/L					**110**	**130**	**120**	**170**	**170**	**160**
Total Suspended Solids	mg/L					**8.2**	**16.3**			**37.0**	**18.3**
Total Organic Carbon (TOC)	mg/L					**3.16**	**2.89**			**4.91**	**3.73**
Total Organic Halides (TOX)	µg/L										
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**2.09**	**2.23**	**15.70**	**12.95**						
Sulfide (Field Measured)	mg/L	**0.02**	**0**	**0**	**0.02**						
Temperature	deg C	**11.48**	**14.90**	**11.90**	**14.21**	**11.82**	**18.30**			**12.03**	**18.91**
pH	pH units					**6.46**	**6.44**			**6.77**	**6.52**
pH (Field Measured)	pH units	**6.55**	**6.94**	**6.12**	**5.80**	**6.31**	**7.22**			**6.6**	**6.38**
Electrical Conductivity (Field Measured)	µS/cm	**772**	**785**	**769**	**691**	**512**	**483**			**361**	**524**
Electrical Conductivity	umhos/cm					**408**	**406**			**552**	**466**
Dissolved Oxygen	mg/L	**0.87**	**0.58**	**1.14**	**0.45**	**1.69**	**0.46**			**0**	**0.52**
Oxidation-Reduction Potential	mV	**-88**	**-58**	**-72**	**-36**	**-41**	**-90**			**-165**	**-116.3**
Salinity	‰					**0.20**	**0.20**			**0.30**	**0.20**
Salinity (Field Measured)	‰	**0.4**	**0**	**0.4**	**0.3**	**0.2**	**0.2**			**0.2**	**0.25**
Turbidity	NTU	**0.7**	**0.7**	**0.4**	**1.85**	**1.18**	**0.53**			**1.23**	**0.46**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-14D	MW-14D	MW-14D	MW-14D	MW-14D	MW-14D	MW-16S	MW-16S	MW-16S	MW-16S
Date		12/2/2011	4/30/2012	3/7/2014	8/29/2014	4/3/2015	9/3/2015	3/26/2009	4/29/2010	10/27/2010	4/28/2011
Sample ID		MW-14D-120211	MW-14D-043012	MW-14D-030714	MW-14D-082914	MW-14D-040315	MW-14D-090315	MW-16-032609	MW-16-042910	MW-16-102710	MW-16-042811
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	**560**	**460**	**330**	**320**	**340**	**320**	**198** j	< 77.1 U	< 31.0 U	
Dissolved Aluminum	µg/L	**240**	**250**					**185** j	< 22.3 U	< 31.0 U	
Total Calcium	µg/L	**20400**	**18100**	**19100**	**18400**	**18300**	**18200**	**134000**	**113000**	**112000**	
Total Iron	µg/L	**9600**	**10100**	**9150**	**8720**	**8280**	**8200**	**4120**	**3160**	**11600**	
Dissolved Iron	µg/L	**9230**	**9840**					**4010** J	**3160**	**10600**	
Total Magnesium	µg/L	**12500**	**12600**	**11000**	**10200**	**9850**	**9760**	**6980**	**5600**	**5480**	
Total Manganese	µg/L	**413**	**318**	**288**	**282**	**270**	**270**	**894**	**639**	**693**	
Dissolved Manganese	µg/L	**412**	**316**					**842**	**639**	**660**	
Total Potassium	µg/L	**14800**	**14800**	**15300**	**14700**	**14600**	**14600**	**3330** j	**5710**	**6020**	
Total Sodium	µg/L	**161000**	**170000**	**173000**	**167000**	**159000**	**163000**	**6540**	**7140**	**9180**	
Nitrate as N	mg/L	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.007 U	< 0.055 UJ	< 0.055 U	< 0.030 U	
Nitrite as N	mg/L							< 0.017 UJ			
Ammonia as N	mg/L										
Chloride	mg/L	**39.9**	**38.5**	**57.4**	**50.9**	**45.3**	**49.8**	**9.5** J	**10.9**	**8.9**	
Sulfate	mg/L	**0.1**	**0.5**	< 0.1 U	< 0.1 U	< 0.1 U	< 0.059 U	**10** J	**8.6**	< 1.0 U	
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L	**432**	**412**	**407**	**393**	**376**	**376**	**190**			
Bicarbonate Alkalinity as CaCO3	mg/L	**432**	**412**	**407**	**393**	**376**	**376**	**190**	**352**	**317**	
Carbonate Alkalinity as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 8 U	< 2.0 U	< 2.0 U	
Hydroxide as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U				
Phosphorus	mg/L	**0.047**	**1.78**	**1.68**	**1.57**	**1.58**	**1.31**	< 0.33 UJ	**0.23**	**0.49** J	
Hardness as CaCO3	mg/L	**100**	**97**	**93**	**88**	**86**	**86**	**310**	**306**	**302**	
Total Suspended Solids	mg/L	**1.7**	< 1.1 U	**1.0**	< 1.0 U	**2.7**	< 0.430 U	**2**	**5.0**	**10.0**	
Total Organic Carbon (TOC)	mg/L	**28.5**	**21.0**	**16.0**	**18.6**	**19.9**	**22.7**	**8.3**	**12.9**	**25.5**	
Total Organic Halides (TOX)	µg/L	**24**	**15**					**110**	**91**	**90**	
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**6.95**	**14.00**					**4.00**	**2.19**	**3.30**	**2.57**
Sulfide (Field Measured)	mg/L	**0.11**	**0.09**					**1.40**	**0.96**		**0.29**
Temperature	deg C	**10.44**	**14.55**	**14.62**	**14.57**	**13.87**	**15.69**	**9.52**	**12.57**	**15.05**	**10.56**
pH	pH units			**6.53**	**6.58**	**6.73**	**6.62**				
pH (Field Measured)	pH units	**6.34**	**5.92**	**6.3**	**7.41**	**6.53**	**6.29**	**9.47**	**6.41**	**6.41**	**6.52**
Electrical Conductivity (Field Measured)	µS/cm	**1020**	**886**	**1060**	**941**	**454**	**853**	**604**	**698**	**531**	**702**
Electrical Conductivity	umhos/cm			**902**	**866**	**778**	**835**				
Dissolved Oxygen	mg/L	**1.17**	**0.55**	**0.66**	**0.46**	**0**	**0.67**	**0.78**	**0.20**	**0.57**	**0.40**
Oxidation-Reduction Potential	mV	**-76**	**-37**	**-42**	**-79**	**-133**	**-10.7**	**-177.5**	**-148.7**	**-114.3**	**-87**
Salinity	‰			**0.40**	**0.40**	**0.40**	**0.40**				
Salinity (Field Measured)	‰	**0.5**	**0.4**	**0.5**	**0.5**	**0.2**	**0.42**	**4.59**	**0.45**	**0.32**	**0.3**
Turbidity	NTU	**6.4**	**2.90**	**2.66**	**1.95**	**2.76**	**2.31**	**0.29**	**6.33**	**7.6**	**3.0**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-16S	MW-16S	MW-17S	MW-17S	MW-17S	MW-17S	MW-17S	MW-17S	MW-17S	MW-17S
Date		12/6/2011	4/30/2012	3/23/2009	4/27/2010	10/25/2010	4/25/2011	11/28/2011	4/25/2012	3/4/2014	8/26/2014
Sample ID		MW-16-120611	MW-16-043012	MW-17-032309	MW-17-042710	MW-17-102510	MW-17-042511	MW-17-112811	MW-17-042512	MW-17S-030414P	MW-17S-082614-NP
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	NoPurge
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L			< 500 U	< 77.1 U	< 31.0 U					
Dissolved Aluminum	µg/L			< 22.3 U	< 22.3 U	< 31.0 U					
Total Calcium	µg/L			**54000** J	**36300**	**68100**					
Total Iron	µg/L			**4070** J	**3940**	**5080**					
Dissolved Iron	µg/L			**3770**	**3620**	**5280**					
Total Magnesium	µg/L			**4000**	**3570** j	**4980** j					
Total Manganese	µg/L			**234**	**193**	**253**					
Dissolved Manganese	µg/L			**242**	**178**	**256**					
Total Potassium	µg/L			**4820** j	**4220** j	**5490**					
Total Sodium	µg/L			**15000** J	**13800**	**12100**					
Nitrate as N	mg/L			< 0.055 U	< 0.055 U	< 0.030 U					
Nitrite as N	mg/L			< 0.017 U							
Ammonia as N	mg/L										
Chloride	mg/L			**4.5**	**5.5**	**38.1**					
Sulfate	mg/L			**5.5**	**10.8**	< 1.0 U					
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L			**190**							
Bicarbonate Alkalinity as CaCO3	mg/L			**190**	**126**	**168**					
Carbonate Alkalinity as CaCO3	mg/L			< 8 U	< 2.0 U	< 2.0 U					
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L			< 0.33 UJ	**0.38**	**0.49**					
Hardness as CaCO3	mg/L			**150**	**105**	**191**					
Total Suspended Solids	mg/L			**6**	**5.0**	< 2.0 U				**1.2**	**1.0**
Total Organic Carbon (TOC)	mg/L			**1.9**	**2.2** J	**2.2**					
Total Organic Halides (TOX)	µg/L			**10**	< 10 U						
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**2.48**	**1.00**	**2.13**	**3.00**	**4.50**	**1.99**	**2.50**	**4.80**		
Sulfide (Field Measured)	mg/L	**0.06**	**0.32**	**0.25**	**0.36**	**0.15**	**0.28**	**0.50**	**0.23**		
Temperature	deg C	**8.41**	**14.13**	**9.84**	**11.85**	**14.48**	**10.36**	**12.99**	**11.62**	**9.13**	
pH	pH units									**6.66**	
pH (Field Measured)	pH units	**5.88**	**5.42**	**8.48**	**6.30**		**6.58**	**6.75**	**7.25**	**6.42**	
Electrical Conductivity (Field Measured)	µS/cm	**444**	**578**	**36.6**	**349**	**309**	**390**	**343**	**384**	**400**	
Electrical Conductivity	umhos/cm									**329**	
Dissolved Oxygen	mg/L	**0.79**	**0.46**	**2.10**	**0.27**	**3.35**	**0.95**	**1.19**	**0.93**	**1.16**	
Oxidation-Reduction Potential	mV	**40**	**9**	**-105.9**	**-141.3**	**-177.7**	**-53**	**-126**	**-68**	**-52**	
Salinity	‰									**0.20**	
Salinity (Field Measured)	‰	**0.2**	**0.3**	**0.18**	**0.23**	**0.19**	**0.2**	**0.2**	**0.2**	**0.2**	
Turbidity	NTU	**9.9**	**9.79**	**1.17**	**1.2**	**0.70**	**0**	**0.6**	**0.90**	**0.3**	

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-17S	MW-17S	MW-17S	MW-17S	MW-17S	MW-18S	MW-18S	MW-18S	MW-18S	MW-18S
Date		8/26/2014	3/31/2015	3/31/2015	9/1/2015	9/1/2015	3/26/2009	4/29/2010	10/27/2010	4/27/2011	11/30/2011
Sample ID		MW-17S-082614-P	MW-17S-033115-NP	MW-17S-033115-P	MW-17S-090115-NP	MW-17S-090115-P	MW-18-032609	MW-18-042910	MW-18-102710	MW-18-042711	MW-18-113011
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	NoPurge	low-flow	NoPurge	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	**Unit**										
WQ Parameters											
Total Aluminum	µg/L						**106** j	< 77.1 U	< 31.0 U		
Dissolved Aluminum	µg/L						**66.9** j	< 22.3 U	< 31.0 U		
Total Calcium	µg/L						**84900**	**101000**	**64200**		
Total Iron	µg/L						**493**	**1570**	**692**		
Dissolved Iron	µg/L						**247** J	**1480**	**647**		
Total Magnesium	µg/L						**3420**	**4980** j	**3390** j		
Total Manganese	µg/L						**36.4**	**60.2**	**15.0**		
Dissolved Manganese	µg/L						**38.7**	**60.4**	< 15.0 U		
Total Potassium	µg/L						**1460** j	**1470** j	**971** j		
Total Sodium	µg/L						**21000**	**16400**	**14400**		
Nitrate as N	mg/L						< 0.055 UJ	< 0.055 U	< 0.030 U		
Nitrite as N	mg/L						**0.26** J				
Ammonia as N	mg/L										
Chloride	mg/L						**9.4** J	**3.4**	**4.4**		
Sulfate	mg/L						**35** J	**67.5**	**30.0**		
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L						**190**				
Bicarbonate Alkalinity as CaCO3	mg/L						**190**	**266**	**160**		
Carbonate Alkalinity as CaCO3	mg/L						< 8 U	< 2.0 U	< 2.0 U		
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L						< 0.33 UJ	**0.021**	< 0.010 U		
Hardness as CaCO3	mg/L						**180**	**272**	**174**		
Total Suspended Solids	mg/L	< 1.0 U	**10.1**	**8.0**	**1.1**	**2.3**	**2**	**5.0**	**3.0**		
Total Organic Carbon (TOC)	mg/L						**3.3**	**3.8**	**3.5**		
Total Organic Halides (TOX)	µg/L						**16**	**5** j	**5** j		
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L						**0.28**	**1.66**	**0.98**	**0.43**	**0.20**
Sulfide (Field Measured)	mg/L						**0.74**	**0.06**	**0.26**	**0.04**	**0.66**
Temperature	deg C	**18.49**		**12.74**		**19.31**	**12.35**	**11.30**	**14.89**	**11.79**	**10.57**
pH	pH units	**6.41**		**6.71**		**6.54**					
pH (Field Measured)	pH units	**6.56**		**8.71**		**6.49**	**9.40**	**6.54**	**7.04**	**6.58**	**6.57**
Electrical Conductivity (Field Measured)	µS/cm	**394**		**622**		**320**	**425**	**601**	**461**	**611**	**419**
Electrical Conductivity	umhos/cm	**369**		**553**		**337**					
Dissolved Oxygen	mg/L	**0**		**0**		**0.38**	**1.00**	**0.27**	**2.35**	**0.81**	**1.04**
Oxidation-Reduction Potential	mV	**-43**		**-124**		**-99.7**	**-164.3**	**-91.4**	**-234.9**	**8**	**-50**
Salinity	‰	**0.20**		**0.30**		**0.20**					
Salinity (Field Measured)	‰	**0.2**		**0.3**		**0.15**	**0.21**	**0.40**	**0.28**	**0.3**	**0.2**
Turbidity	NTU	**2.27**		**0.92**		**1.39**	**2.71**	**1.28**	**2.4**	**1.5**	**2.4**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-18S	MW-18S	MW-18S	MW-18S	MW-18S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S
Date		4/26/2012	3/10/2014	8/26/2014	3/31/2015	9/1/2015	3/26/2009	4/30/2010	10/28/2010	4/28/2011	12/1/2011
Sample ID		MW-18-042612	MW-18S-031014	MW-18S-082614	MW-18S-033115	MW-18S-090115	MW-19-032609	MW-19-043010	MW-19-102810	MW-19-042811	MW-19-120111
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L						**92.7** j	< 77.1 U	< 31.0 U		
Dissolved Aluminum	µg/L						**101** j	< 22.3 U	< 31.0 U		
Total Calcium	µg/L						**41100**	**32400**	**28300**		
Total Iron	µg/L						**9250**	**12100**	**10900**		
Dissolved Iron	µg/L						**7750** J	**10900**	**10100**		
Total Magnesium	µg/L						**10500**	**10000**	**10300**		
Total Manganese	µg/L						**419**	**441**	**411**		
Dissolved Manganese	µg/L						**369**	**422**	**390**		
Total Potassium	µg/L						**8930**	**9760**	**10400**		
Total Sodium	µg/L						**30700**	**24600**	**28500**		
Nitrate as N	mg/L						< 0.055 UJ	< 0.055 U	< 0.030 U		
Nitrite as N	mg/L						**0.16** J				
Ammonia as N	mg/L										
Chloride	mg/L						**5.6** J	**5.3**	**9.5**		
Sulfate	mg/L						**8.8** J	**1.7**	< 1.0 U		
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L						**210**				
Bicarbonate Alkalinity as CaCO3	mg/L						**210**	**204**	**170**		
Carbonate Alkalinity as CaCO3	mg/L						< 8 U	< 2.0 U	< 2.0 U		
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L						< 0.33 UJ	**0.60**	**0.92**		
Hardness as CaCO3	mg/L						**130**	**122**	**113**		
Total Suspended Solids	mg/L						**5**	**14.0**	**10.0**		
Total Organic Carbon (TOC)	mg/L						< 2.3 U	**2.8**	**3.2**		
Total Organic Halides (TOX)	µg/L						< 4 U	< 4 U	< 4 U		
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**0.20**					**8.46**	**11.22**	**2.58**	**1.57**	**11.40**
Sulfide (Field Measured)	mg/L	**0.07**					**0.29**	**0.06**	**0.24**	**0**	**0.01**
Temperature	deg C	**14.28**	**8.99**	**23.67**	**12.21**	**18.6**	**11.26**	**11.58**	**15.25**	**11.86**	**11.36**
pH	pH units		**7.36**	**6.27**	**6.82**	**6.50**					
pH (Field Measured)	pH units	**6.08**	**7.15**	**6.06**	**7**	**6.38**	**9.17**	**6.20**	**6.34**	**6.49**	**6.37**
Electrical Conductivity (Field Measured)	µS/cm	**441**	**372**	**511**	**191**	**438**	**397**	**356**	**281**	**467**	**439**
Electrical Conductivity	umhos/cm		**301**	**498**	**370**	**442**					
Dissolved Oxygen	mg/L	**2.40**	**3.43**	**0.5**	**0**	**0.45**	**0.72**	**0.30**	**5.20**	**0.39**	**1.00**
Oxidation-Reduction Potential	mV	**-17**	**-26**	**8**	**-99**	**-91.1**	**-181.6**	**-122.2**	**-57.3**	**-57**	**-53**
Salinity	‰		**0.10**	**0.20**	**0.20**	**0.20**					
Salinity (Field Measured)	‰	**0.2**	**0.2**	**0.2**	**0.1**	**0.21**	**0.19**	**0.23**	**0.17**	**0.2**	**0.2**
Turbidity	NTU	**2.73**	**0.37**	**3.71**	**0.62**	**2.79**	**1.36**	**3.96**	**6.3**	**0.2**	**0.8**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-20S	MW-20S	MW-20S	MW-20S	MW-20S
Date		5/1/2012	3/5/2014	8/25/2014	3/30/2015	8/31/2015	3/26/2009	4/28/2010	10/25/2010	4/27/2011	11/30/2011
Sample ID		MW-19-050112	MW-19S-030514	MW-19S-082514	MW-19S-033015	MW-19S-083115	MW-20-032609	MW-20-042810	MW-20-102510	MW-20-042711	MW-20-113011
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	**Unit**										
WQ Parameters											
Total Aluminum	µg/L						**53.2** j	< 77.1 U	< 31.0 U		
Dissolved Aluminum	µg/L						**68.7** j	< 22.3 U	< 31.0 U		
Total Calcium	µg/L						**48000**	**36800**	**23400**		
Total Iron	µg/L						**19500**	**21600**	**19800**		
Dissolved Iron	µg/L						**19900** J	**21300**	**19000**		
Total Magnesium	µg/L						**28100**	**24100**	**19100**		
Total Manganese	µg/L						**1240**	**868**	**576**		
Dissolved Manganese	µg/L						**919**	**875**	**565**		
Total Potassium	µg/L						**15900**	**14800**	**14300**		
Total Sodium	µg/L						**27800**	**26600**	**19800**		
Nitrate as N	mg/L						< 0.055 UJ	< 0.055 U	< 0.030 U		
Nitrite as N	mg/L						**0.26** J				
Ammonia as N	mg/L										
Chloride	mg/L						**8.4** J	**7.5**	**7.4**		
Sulfate	mg/L						**4.4** J	**22.5**	**2.2**		
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L						**280**				
Bicarbonate Alkalinity as CaCO3	mg/L						**280**	**184**	**195**		
Carbonate Alkalinity as CaCO3	mg/L						< 8 U	< 2.0 U	< 2.0 U		
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L						< 0.33 UJ	**0.63**	**1.2**		
Hardness as CaCO3	mg/L						**200**	**191**	**137**		
Total Suspended Solids	mg/L						**15**	**22.0**	**42.0**		
Total Organic Carbon (TOC)	mg/L						**3.8**	**3.8** J	**4.2**		
Total Organic Halides (TOX)	µg/L						< 4 U	< 4 U	**1**		
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**8.65**					**22.70**	**16.80**	**11.65**	**1.00**	**5.08**
Sulfide (Field Measured)	mg/L	**0.01**					**0.15**	**0.11**	**0.19**	**0.08**	**0.19**
Temperature	deg C	**11.81**	**11.53**	**18.73**	**13.4**	**16.48**	**11.63**	**11.96**	**14.29**	**11.07**	**12.50**
pH	pH units		**6.44**	**6.25**	**6.51**	**6.42**					
pH (Field Measured)	pH units	**6.81**	**6.28**	**6.72**	**6.23**	**6.25**	**9.69**	**6.00**		**6.59**	**6.30**
Electrical Conductivity (Field Measured)	µS/cm	**353**	**479**	**417**	**401**	**522**	**545**	**693**	**363**	**498**	**517**
Electrical Conductivity	umhos/cm		**391**	**403**	**362**	**250**					
Dissolved Oxygen	mg/L	**0.53**	**0.87**	**0.42**	**0**	**0.52**	**0.81**	**0.55**	**0.98**	**0.71**	**0.84**
Oxidation-Reduction Potential	mV	**-35**	**-53**	**-71**	**-140**	**-63.9**	**-184.0**	**-136.6**	**-195.6**	**-99**	**-75**
Salinity	‰		**0.20**	**0.20**	**0.20**	**0.10**					
Salinity (Field Measured)	‰	**0.2**	**0.2**	**0.2**	**0.2**	**0.25**	**0.27**	**0.46**	**0.22**	**0.2**	**0.2**
Turbidity	NTU	**2.77**	**0.75**	**0.32**	**0.99**	**1**	**1.95**	**7.40**	**4.31**	**2.4**	**1.1**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-20S	MW-20S	MW-20S	MW-20S	MW-20S	MW-20D	MW-20D	MW-20D	MW-20D	MW-21S
Date		4/26/2012	3/12/2014	8/28/2014	4/2/2015	9/1/2015	3/12/2014	8/28/2014	4/2/2015	9/1/2015	3/24/2009
Sample ID		MW-20-042612	MW-20S-031214	MW-20S-082814	MW-20S-040215	MW-20S-090115	MW-20D-031214	MW-20D-082814	MW-20D-040215	MW-20D-090115	MW-21-032409
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L		< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**38.5** j
Dissolved Aluminum	µg/L										**40.7** j
Total Calcium	µg/L		**106000**	**27500**	**46600**	**40700**	**47600**	**47300**	**52100**	**48700**	**41700**
Total Iron	µg/L		< 50 U	**23800**	**22000**	**19100**	**10000**	**15100**	**11700**	**9450**	**17900**
Dissolved Iron	µg/L										**18000**
Total Magnesium	µg/L		**14100**	**15100**	**22900**	**13000**	**28100**	**28100**	**31800**	**30200**	**17300**
Total Manganese	µg/L		**4**	**627**	**1080**	**435**	**2310**	**1690**	**1220**	**999**	**560**
Dissolved Manganese	µg/L										**578**
Total Potassium	µg/L		**3100**	**14700**	**16800**	**12200**	**10800**	**10500**	**11800**	**11000**	**11500**
Total Sodium	µg/L		**22500**	**22800**	**33900**	**19400**	**54100**	**47700**	**48800**	**46400**	**28500** J
Nitrate as N	mg/L		< 0.1 U	< 0.1 U	< 0.1 U	**0.4**	< 0.1 U	< 0.1 U	< 0.1 U	< 0.007 U	< 0.055 U
Nitrite as N	mg/L										< 0.017 UJ
Ammonia as N	mg/L										
Chloride	mg/L		**3.2**	**5.6**	**6.6**	**8.1**	**21.7**	**37.0**	**41.7**	**32.5**	**9.7** J
Sulfate	mg/L		**65.9**	**2.2**	**3.4**	**22.1**	< 0.1 U	**0.3**	< 0.1 U	**0.5**	**26**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L		**291**	**222**	**284**	**188**	**349**	**324**	**312**	**330**	**240**
Bicarbonate Alkalinity as CaCO3	mg/L		**291**	**222**	**284**	**188**	**349**	**324**	**312**	**330**	**240**
Carbonate Alkalinity as CaCO3	mg/L		< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 8 U
Hydroxide as CaCO3	mg/L		< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	
Phosphorus	mg/L		**0.060**	**2.86**	**2.15**	**1.51**	**0.387**	**0.505**	**0.604**	**0.550**	< 0.33 U
Hardness as CaCO3	mg/L		**320**	**130**	**210**	**160**	**230**	**230**	**260**	**250**	**150**
Total Suspended Solids	mg/L		**1.8**	**36.6**	**19.5**	**19.1**	**15.5**	**25.2**	**7.4**	**15.2**	**22**
Total Organic Carbon (TOC)	mg/L		**3.38**	**3.25**	**6.32**	**7.82**	**8.74**	**4.60**	**4.62**	**5.02**	**2.3**
Total Organic Halides (TOX)	µg/L										**6** j
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**16.00**									**2.44**
Sulfide (Field Measured)	mg/L	**0.06**									**0.11**
Temperature	deg C	**15.79**	**9.31**	**17.57**	**12.15**	**17.51**	**11.21**	**17.98**	**11.77**	**14.82**	**10.57**
pH	pH units		**6.37**	**6.40**	**6.49**	**6.36**	**6.56**	**6.52**	**6.50**	**6.55**	
pH (Field Measured)	pH units	**5.75**	**6.23**	**6.36**	**7.31**	**6.24**	**6.56**	**6.65**	**6.69**	**6.05**	**7.57**
Electrical Conductivity (Field Measured)	µS/cm	**484**	**756**	**478**	**311**	**464**	**817**	**732**	**400**	**628**	**481**
Electrical Conductivity	umhos/cm		**653**	**398**	**507**	**453**	**679**	**671**	**666**	**690**	
Dissolved Oxygen	mg/L	**2.87**	**1.65**	**2.60**	**0**	**0.85**	**0.76**	**1.53**	**0**	**0.31**	**2.18**
Oxidation-Reduction Potential	mV	**-66**	**36**	**-132**	**-170**	**-75**	**-6**	**-117**	**-100**	**69.9**	**-165.0**
Salinity	‰		**0.30**	**0.20**	**0.20**	**0.20**	**0.30**	**0.30**	**0.30**	**0.30**	
Salinity (Field Measured)	‰	**0.2**	**0.4**	**0.2**	**0.1**	**0.22**	**0.4**	**0.4**	**0.2**	**0.29**	**0.23**
Turbidity	NTU	**7.95**	**2.52**	**3.19**	**3.25**	**4.71**	**0.61**	**1.25**	**0.36**	**1.73**	**0.34**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-21S	MW-21S	MW-21S	MW-21S	MW-21S	MW-21S	MW-21S	MW-21S	MW-21S	MW-22S
Date		4/28/2010	10/26/2010	4/27/2011	11/30/2011	4/26/2012	3/5/2014	8/26/2014	3/30/2015	9/1/2015	3/24/2009
Sample ID		MW-21-042810	MW-21-102610	MW-21-042711	MW-21-113011	MW-21-042612	MW-21S-030514	MW-21S-082614	MW-21S-033015	MW-21S-090115	MW-22-032409
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	< 77.1 U	< 31.0 U								< 22.3 U
Dissolved Aluminum	µg/L	< 22.3 U	< 31.0 U								**37.9** j
Total Calcium	µg/L	**32900**	**40800**								**52900**
Total Iron	µg/L	**13200**	**14600**								**14900**
Dissolved Iron	µg/L	**13400**	**15000**								**14400**
Total Magnesium	µg/L	**11100**	**12400**								**13700**
Total Manganese	µg/L	**382**	**453**								**454**
Dissolved Manganese	µg/L	**390**	**459**								**464**
Total Potassium	µg/L	**9510**	**11800**								**10800**
Total Sodium	µg/L	**27200**	**28500**								**34300** J
Nitrate as N	mg/L	< 0.055 U	< 0.030 U								< 0.055 U
Nitrite as N	mg/L										< 0.017 UJ
Ammonia as N	mg/L										
Chloride	mg/L	**6.6**	**6.1**								**12** J
Sulfate	mg/L	**31.5**	**30.9**								**50**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L										**220**
Bicarbonate Alkalinity as CaCO3	mg/L	**256**	**187**								**220**
Carbonate Alkalinity as CaCO3	mg/L	< 2.0 U	< 2.0 U								< 8 U
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L	**1.2**	**1.2**								< 0.33 U
Hardness as CaCO3	mg/L	**128**	**153**								**170**
Total Suspended Solids	mg/L	**7.0**	**18.0**								**12**
Total Organic Carbon (TOC)	mg/L	**2.7** J	**3.5**								**2**
Total Organic Halides (TOX)	µg/L	< 4 U	< 4 U								**5** j
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**12.15**	**11.90**	**2.22**	**2.38**	**5.00**					**2.74**
Sulfide (Field Measured)	mg/L	**0.13**	**0.16**	**0.12**	**0.16**	**0.09**					**0.07**
Temperature	deg C	**11.20**	**13.56**	**10.32**	**12.05**	**11.05**	**10.73**	**19.30**	**13.97**	**12.64**	**10.66**
pH	pH units						**6.59**	**6.32**	**6.58**	**6.22**	
pH (Field Measured)	pH units	**5.88**	**6.41**	**6.58**	**6.26**	**5.79**	**6.45**	**6.76**	**6.59**	**6.25**	**7.84**
Electrical Conductivity (Field Measured)	µS/cm	**516**	**449**	**475**	**434**	**400**	**491**	**493**	**432**	**485**	**507**
Electrical Conductivity	umhos/cm						**400**	**458**	**386**	**500**	
Dissolved Oxygen	mg/L	**0.20**	**1.57**	**0.56**	**0.99**	**0.61**	**1.42**	**0.44**	**0**	**0.7**	**3.12**
Oxidation-Reduction Potential	mV	**-129.1**	**-285.0**	**-77**	**-53**	**-39**	**-83**	**-64**	**-101**	**-99.3**	**-182.9**
Salinity	‰						**0.20**	**0.20**	**0.20**	**0.20**	
Salinity (Field Measured)	‰	**0.34**	**0.28**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.23**	**0.25**
Turbidity	NTU	**1.23**	**1.3**	**0**	**1.0**	**2.13**	**1.19**	**0.26**	**0.34**	**3.57**	**2.15**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-22S	MW-22S	MW-22S	MW-22S	MW-22S	MW-22S	MW-22S	MW-22S	MW-22S	MW-22S
Date		4/28/2010	10/25/2010	4/26/2011	11/28/2011	4/25/2012	8/27/2014	8/27/2014	4/1/2015	4/1/2015	9/3/2015
Sample ID		MW-22-042810	MW-22-102610	MW-22-042611	MW-22-112811	MW-22-042512	MW-22S-082714-NP	MW-22S-082714-P	MW-22S-040115-NP	MW-22S-040115-P	MW-22S-090315-NP
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	< 77.1 U	< 31.0 U								
Dissolved Aluminum	µg/L	< 22.3 U	< 31.0 U								
Total Calcium	µg/L	**47500**	**36000**								
Total Iron	µg/L	**11400**	**9470**								
Dissolved Iron	µg/L	**11000**	**9990**								
Total Magnesium	µg/L	**11100**	**10900**								
Total Manganese	µg/L	**379**	**343**								
Dissolved Manganese	µg/L	**367**	**350**								
Total Potassium	µg/L	**9780**	**10500**								
Total Sodium	µg/L	**29600**	**29100**								
Nitrate as N	mg/L	< 0.055 U	< 0.030 U								
Nitrite as N	mg/L										
Ammonia as N	mg/L										
Chloride	mg/L	**6.8**	**6.2**								
Sulfate	mg/L	**48.9**	**17.8**								
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L										
Bicarbonate Alkalinity as CaCO3	mg/L	**204**	**208**								
Carbonate Alkalinity as CaCO3	mg/L	< 2.0 U	< 2.0 U								
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L	**0.44**	**0.60**								
Hardness as CaCO3	mg/L	**164**	**135**								
Total Suspended Solids	mg/L	**18.0**	**13.0**				**19.4**		**13.8**	**15.2**	**13.8**
Total Organic Carbon (TOC)	mg/L	**2.8**	**3.5**								
Total Organic Halides (TOX)	µg/L	< 4 U	**2**								
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**2.08**	**7.85**	**1.91**	**1.43**	**6.05**					
Sulfide (Field Measured)	mg/L	**0.09**	**0.23**	**0.05**	**0.10**	**0.09**					
Temperature	deg C	**11.71**	**14.10**	**11.49**	**12.15**	**12.96**		**20.81**		**11.11**	
pH	pH units							**6.53**		**6.76**	
pH (Field Measured)	pH units	**6.20**	**6.45**	**6.66**	**6.54**	**7.44**		**6.52**		**6.97**	
Electrical Conductivity (Field Measured)	µS/cm	**575**	**381**	**522**	**421**	**470**		**596**		**288**	
Electrical Conductivity	umhos/cm							**487**		**477**	
Dissolved Oxygen	mg/L	**0.27**	**1.77**	**1.67**	**1.02**	**1.10**		**0.50**		**0**	
Oxidation-Reduction Potential	mV	**-157.4**	**-301.0**	**-77**	**-92**	**-69**		**-91**		**-146**	
Salinity	‰							**0.20**		**0.20**	
Salinity (Field Measured)	‰	**0.38**	**0.23**	**0.2**	**0.2**	**0.2**		**0.3**		**0.1**	
Turbidity	NTU	**2.36**	**1.8**	**5.8**	**4.3**	**1.75**		**0.39**		**1.21**	

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-22S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-23S	MW-24S	MW-24S	MW-24S
Date		9/3/2015	3/24/2009	4/28/2010	10/26/2010	4/27/2011	11/28/2011	4/25/2012	3/25/2009	4/28/2010	10/25/2010
Sample ID		MW-22S-090315-P	MW-23-032409	MW-23-042810	MW-23-102610	MW-23-042711	MW-23-112811	MW-23-042512	MW-24-032509	MW-24-042810	MW-24-102610
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L		**58.4** j	**268** j	< 31.0 U				**61.4** J	< 77.1 U	< 31.0 U
Dissolved Aluminum	µg/L		**53.4** j	< 22.3 U	< 31.0 U				**64.3** j	< 22.3 U	< 31.0 U
Total Calcium	µg/L		**34900**	**68800**	**67300**				**46600**	**34600**	**36300**
Total Iron	µg/L		**20600**	**21700**	**15700**				**15100**	**14900**	**12600**
Dissolved Iron	µg/L		**20500**	**20200**	**16000**				**14500** J	**15100**	**13100**
Total Magnesium	µg/L		**24300**	**29600**	**26900**				**27800**	**22500**	**25200**
Total Manganese	µg/L		**579**	**550**	**469**				**626**	**501**	**325**
Dissolved Manganese	µg/L		**566**	**524**	**472**				**634**	**511**	**315**
Total Potassium	µg/L		**10000**	**13500**	**13000**				**10600**	**10100**	**10700**
Total Sodium	µg/L		**23800** J	**33400**	**30400**				**28100**	**26900**	**26900**
Nitrate as N	mg/L		< 0.055 U	< 0.055 U	< 0.030 U				< 0.055 U	< 0.055 U	< 0.030 U
Nitrite as N	mg/L		< 0.017 UJ						**0.18** J		
Ammonia as N	mg/L										
Chloride	mg/L		**8.1** J	**6.2**	**6.3**				**5.5**	**39.0**	**31.5**
Sulfate	mg/L		**17**	**50.4**	**12.6**				**31**	**27.1**	**7.3**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L		**250**						**260**		
Bicarbonate Alkalinity as CaCO3	mg/L		**250**	**340**	**333**				**260**	**208**	**251**
Carbonate Alkalinity as CaCO3	mg/L		< 8 U	< 2.0 U	< 2.0 U				< 8 U	< 2.0 U	< 2.0 U
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L		< 0.33 U	**0.30**	**0.53**				< 0.33 UJ	**0.29**	**0.51**
Hardness as CaCO3	mg/L		**160**	**294**	**279**				**220**	**179**	**194**
Total Suspended Solids	mg/L	**12.9**	**15**	**19.0**	**22.0**				**14**	**7.0**	**6.0**
Total Organic Carbon (TOC)	mg/L		**2.5**	**6.2**	**8.2**				**2**	**6.6** J	**3.2**
Total Organic Halides (TOX)	µg/L		**7** j	< 4 U	< 4 U				**6** j	< 4 U	**1**
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L		**3.30**	**1.30**	**13.10**	**2.12**	**1.90**	**18.00**	**1.92**	**2.53**	**10.70**
Sulfide (Field Measured)	mg/L		**0.01**	**0**	**0.04**	**0.01**	**0.02**	**0.04**	**0.12**	**0.24**	**0.54**
Temperature	deg C	**18.3**	**10.43**	**11.40**	**13.95**	**10.34**	**13.40**	**13.93**	**10.22**	**10.47**	**12.26**
pH	pH units	**6.71**									
pH (Field Measured)	pH units	**6.32**	**7.76**	**5.98**	**6.49**	**6.52**	**6.54**	**7.09**	**8.45**	**5.76**	**6.23**
Electrical Conductivity (Field Measured)	µS/cm	**368**	**460**	**883**	**640**	**845**	**730**	**738**	**552**	**657**	**524**
Electrical Conductivity	umhos/cm	**412**									
Dissolved Oxygen	mg/L	**0.57**	**2.53**	**0.30**	**1.91**	**0.62**	**1.28**	**0.93**	**1.80**	**0.27**	**2.71**
Oxidation-Reduction Potential	mV	**-68.8**	**-170.3**	**-75.7**	**-305.1**	**-74**	**-65**	**-27**	**-93.2**	**-136.7**	**-270.0**
Salinity	‰	**0.20**									
Salinity (Field Measured)	‰	**0.17**	**0.22**	**0.60**	**0.40**	**0.4**	**0.4**	**0.4**	**0.27**	**0.45**	**0.34**
Turbidity	NTU	**0.32**	**0.30**	**1.50**	**2.9**	**0**	**1.4**	**0.71**	**0.16**	**0.76**	**0.75**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-24S	MW-24S	MW-24S	MW-26S	MW-26S	MW-26S	MW-26S	MW-26S	MW-26S	MW-26S
Date		4/27/2011	11/30/2011	4/25/2012	3/26/2009	4/29/2010	10/27/2010	4/28/2011	12/1/2011	4/30/2012	3/11/2014
Sample ID		MW-24-042711	MW-24-113011	MW-24-042512	MW-26-032609	MW-26-042910	MW-26-102710	MW-26-042811	MW-26-120111	MW-26-043012	MW-26S-031114
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L				**111** j	< 77.1 U	< 31.0 U				
Dissolved Aluminum	µg/L				**63.3** j	< 22.3 U	< 31.0 U				
Total Calcium	µg/L				**46400**	**28500**	**33400**				
Total Iron	µg/L				**29200**	**27400**	**21300**				
Dissolved Iron	µg/L				**31000** J	**27800**	**21300**				
Total Magnesium	µg/L				**8180**	**6440**	**6660**				
Total Manganese	µg/L				**529**	**377**	**323**				
Dissolved Manganese	µg/L				**511**	**382**	**324**				
Total Potassium	µg/L				**9140**	**8310**	**9280**				
Total Sodium	µg/L				**59700**	**50600**	**56700**				
Nitrate as N	mg/L				< 0.055 UJ	< 0.055 U	< 0.030 U				
Nitrite as N	mg/L				**0.14** J						
Ammonia as N	mg/L										
Chloride	mg/L				**7.9** J	**11.9**	**14.2**				
Sulfate	mg/L				**14** J	**0.23** j	**13.9**				
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L				**250**						
Bicarbonate Alkalinity as CaCO3	mg/L				**250**	**240**	**236**				
Carbonate Alkalinity as CaCO3	mg/L				< 8 U	< 2.0 U	< 2.0 U				
Hydroxide as CaCO3	mg/L										
Phosphorus	mg/L				< 0.33 UJ	**1.3**	**1.2** J				
Hardness as CaCO3	mg/L				**130**	**97.7**	**111**				
Total Suspended Solids	mg/L				**33**	**33.0**	**34.0**				
Total Organic Carbon (TOC)	mg/L				**5.5**	**9.0**	**7.3**				
Total Organic Halides (TOX)	µg/L				< 4 U	< 4 U	**6** j				
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**1.83**	**2.74**	**24.00**	**2.95**	**2.17**	**1.89**	**3.30**	**27.25**	**30.00**	
Sulfide (Field Measured)	mg/L	**0.18**	**0.23**	**0.25**	**0.20**	**0.16**	**0.27**	**0.23**	**0.20**	**0.20**	
Temperature	deg C	**10.01**	**11.59**	**14.01**	**10.06**	**12.88**	**15.00**	**11.20**	**12.42**	**13.46**	**17.18**
pH	pH units										**6.13**
pH (Field Measured)	pH units	**6.24**	**6.03**	**6.77**	**9.25**	**6.52**	**6.06**	**6.41**	**6.27**	**5.57**	**5.88**
Electrical Conductivity (Field Measured)	µS/cm	**571**	**563**	**579**	**560**	**559**	**488**	**786**	**801**	**736**	**495**
Electrical Conductivity	umhos/cm										**516**
Dissolved Oxygen	mg/L	**0.80**	**1.04**	**0.73**	**1.79**	**0.28**	**0.91**	**0.41**	**0.73**	**0.71**	**0.46**
Oxidation-Reduction Potential	mV	**-30**	**-26**	**-26**	**-172.7**		**-81.9**		**-77**	**-65**	**15**
Salinity	‰										**0.20**
Salinity (Field Measured)	‰	**0.3**	**0.3**	**0.3**	**0.27**	**0.36**	**0.29**	**0.4**	**0.4**	**0.4**	**0.2**
Turbidity	NTU	**0**	**1.0**	**0.60**	**0.18**	**1.03**	**1.4**	**0.5**	**0.8**	**1.83**	**6.35**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-26S	MW-26S	MW-26S	MW-26S	MW-26S	MW-26S	MW-26S	MW-27S		MW-27S		MW-27S	
Date		3/26/2014	8/25/2014	8/25/2014	4/1/2015	4/1/2015	9/2/2015	9/2/2015	3/26/2009		4/29/2010		10/27/2010	
Sample ID		MW-26S-032614	MW-26S-082514-NP	MW-26S-082514-P	MW-26S-040115-NP	MW-26S-040115-P	MW-26S-090215-NP	MW-26S-090215-P	MW-27-032609		MW-27-042910		MW-27-102710	
Sample Type		N	N	N	N	N	N	N	N		N		N	
Sample Method		low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge	low-flow	low-flow		low-flow		low-flow	
Analyte	Unit													
WQ Parameters														
Total Aluminum	µg/L								**132**	j	< 77.1	U	< 31.0	U
Dissolved Aluminum	µg/L								**96.9**	j	< 22.3	U	< 31.0	U
Total Calcium	µg/L								**87000**		**128000**		**153000**	
Total Iron	µg/L								**1350**		**7330**		**7600**	
Dissolved Iron	µg/L								**1340**	J	**7630**		**7460**	
Total Magnesium	µg/L								**18600**		**64900**		**80100**	
Total Manganese	µg/L								**219**		**569**		**444**	
Dissolved Manganese	µg/L								**197**		**584**		**432**	
Total Potassium	µg/L								**13600**		**16000**		**32000**	
Total Sodium	µg/L								**68800**		**126000**		**747000**	
Nitrate as N	mg/L								< 0.055	UJ	< 0.55	U	< 0.030	U
Nitrite as N	mg/L								< 0.017	UJ				
Ammonia as N	mg/L													
Chloride	mg/L								**2.2**	J	**422**		**1170**	
Sulfate	mg/L								**2.8**	J	**85.3**		**152**	
Sulfide	mg/L													
Total Alkalinity as CaCO3	mg/L								**240**					
Bicarbonate Alkalinity as CaCO3	mg/L								**240**		**392**		**415**	
Carbonate Alkalinity as CaCO3	mg/L								< 8	U	< 2.0	U	< 2.0	U
Hydroxide as CaCO3	mg/L													
Phosphorus	mg/L								< 0.33	UJ	**0.20**		**0.51**	J
Hardness as CaCO3	mg/L								**240**		**588**		**712**	
Total Suspended Solids	mg/L	**48.1**	**55.8**	**45.8**	**37.3**	**51.0**	**39.6**	**38.7**	< 2	U	**6.0**		**16.0**	
Total Organic Carbon (TOC)	mg/L								**3.4**		**5.6**		**5.3**	
Total Organic Halides (TOX)	µg/L								< 4	U	**9**	j	**8**	j
Chemical Oxygen Demand (COD)	mg/L													
Field Parameters														
Ferrous Iron (Field Measured)	mg/L								**1.69**		**6.20**		**2.62**	
Sulfide (Field Measured)	mg/L								**0.04**		**0.02**		**0.08**	
Temperature	deg C			**23.61**		**18.4**		**16.3**	**9.80**		**12.44**		**15.99**	
pH	pH units			**6.18**		**6.31**		**6.38**						
pH (Field Measured)	pH units			**6.24**		**7.27**		**6.49**	**9.50**		**6.45**		**6.35**	
Electrical Conductivity (Field Measured)	µS/cm			**538**		**275**		**700**	**699**		**1497**		**4573**	
Electrical Conductivity	umhos/cm			**500**		**541**		**600**						
Dissolved Oxygen	mg/L			**0.34**		**0.14**		**0.69**	**1.10**		**0.28**		**0.59**	
Oxidation-Reduction Potential	mV			**-102**		**-126**		**-45.8**	**-173.0**		**-51.7**		**-58.8**	
Salinity	‰			**0.20**		**0.30**		**0.30**						
Salinity (Field Measured)	‰			**0.3**		**0.1**		**0.34**	**0.34**		**1.01**		**2.98**	
Turbidity	NTU			**1.99**		**3.09**		**1.51**	**0.33**		**2.22**		**2.1**	

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-27S	MW-27S	MW-27S	MW-27S	MW-27S	MW-27S	MW-27S	MW-27S	MW-27S	MW-28S
Date		4/28/2011	12/1/2011	4/30/2012	8/28/2014	8/28/2014	4/2/2015	4/2/2015	9/2/2015	9/2/2015	12/2/2011
Sample ID		MW-27-042811	MW-27-120111	MW-27-043012	MW-27S-082814-NP	MW-27S-082814-P	MW-27S-040215-NP	MW-27S-040215-P	MW-27S-090215-NP	MW-27S-090215-P	MW-28S-120211
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L										< 50 U
Dissolved Aluminum	µg/L										< 50 U
Total Calcium	µg/L										**76500**
Total Iron	µg/L										**6940**
Dissolved Iron	µg/L										**7020**
Total Magnesium	µg/L										**7230**
Total Manganese	µg/L										**583**
Dissolved Manganese	µg/L										**587**
Total Potassium	µg/L										**6640**
Total Sodium	µg/L										**21500**
Nitrate as N	mg/L										< 0.1 U
Nitrite as N	mg/L										
Ammonia as N	mg/L										**0.360**
Chloride	mg/L										**10.6**
Sulfate	mg/L										**13.4**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L										**253**
Bicarbonate Alkalinity as CaCO3	mg/L										**253**
Carbonate Alkalinity as CaCO3	mg/L										< 1.0 U
Hydroxide as CaCO3	mg/L										< 1.0 U
Phosphorus	mg/L										**0.234**
Hardness as CaCO3	mg/L										**220**
Total Suspended Solids	mg/L				**1.3**	**2.8**	< 1.2 U	< 1.0 U	**6.7**		**12.7**
Total Organic Carbon (TOC)	mg/L										**7.59**
Total Organic Halides (TOX)	µg/L										**8** j
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**2.37**	**4.05**	**17.00**							**6.80**
Sulfide (Field Measured)	mg/L	**0.06**	**0**	**0.08**							**0.01**
Temperature	deg C	**10.22**	**12.08**	**13.00**		**17.72**		**12.66**		**17.89**	**10.49**
pH	pH units					**6.42**		**6.73**		**6.43**	
pH (Field Measured)	pH units	**6.44**	**6.46**	**5.96**		**6.38**		**7.55**		**6.34**	**6.22**
Electrical Conductivity (Field Measured)	µS/cm	**1090**	**14800**	**1020**		**13100**		**553**		**15190**	**621**
Electrical Conductivity	umhos/cm					**11200**		**949**		**14000**	
Dissolved Oxygen	mg/L	**0.50**	**0.55**	**0.70**		**0.87**		**0.34**		**0.49**	**0.98**
Oxidation-Reduction Potential	mV	**-35**	**-22**	**-44**		**-4**		**-63**		**-51.2**	**-8**
Salinity	‰					**6.60**		**0.50**		**8.00**	
Salinity (Field Measured)	‰	**0.5**		**0.5**		**7.5**		**0.3**		**8.88**	**0.3**
Turbidity	NTU	**1.3**	**0**	**1.05**		**0.82**		**6.21**		**0.43**	**7.2**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-28S	MW-29S	MW-29S	MW-29S	MW-30S	MW-30S	MW-30S	MW-30S	MW-30S	MW-30S
Date		5/1/2012	12/2/2011	5/2/2012	3/13/2014	12/5/2011	5/2/2012	3/10/2014	8/26/2014	4/1/2015	9/3/2015
Sample ID		MW-28S-050112	MW-29S-120211	MW-29S-050212	MW-29S-031314P	MW-30S-120511	MW-30S-050212	MW-30S-031014	MW-30S-082614	MW-30S-040115	MW-30S-090315
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				
Dissolved Aluminum	µg/L	< 50 U	< 50 U	< 50 U		< 50 U	< 50 U				
Total Calcium	µg/L	**67100**	**54300**	**48000**		**56000**	**45000**				
Total Iron	µg/L	**11900**	**11600**	**9700**		**8280**	**7040**				
Dissolved Iron	µg/L	**12100**	**11600**	**9300**		**8300**	**6800**				
Total Magnesium	µg/L	**6500**	**13400**	**11200**		**11100**	**9660**				
Total Manganese	µg/L	**367**	**629**	**377**		**441**	**377**				
Dissolved Manganese	µg/L	**350**	**631**	**366**		**448**	**366**				
Total Potassium	µg/L	**5210**	**9380**	**7680**		**7930**	**6470**				
Total Sodium	µg/L	**11500**	**30700**	**32400**		**13800**	**10600**				
Nitrate as N	mg/L	< 0.1 U	< 0.1 U	< 0.1 U		**0.2**	< 0.1 U				
Nitrite as N	mg/L										
Ammonia as N	mg/L	**0.344**	**1.82**	**1.47**		**2.06**	**1.98**				
Chloride	mg/L	**35.8**	**51.1**	**55.7**		**6.7**	**8.9**				
Sulfate	mg/L	**21.0**	**11.6**	**2.5**		**1.8**	< 0.1 U				
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L	**166**	**191**	**169**		**216**	**169**				
Bicarbonate Alkalinity as CaCO3	mg/L	**166**	**191**	**169**		**216**	**169**				
Carbonate Alkalinity as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U	< 1.0 U				
Hydroxide as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U	< 1.0 U				
Phosphorus	mg/L	**0.391**	**0.768**	**1.07**		**1.22** J	**1.26**				
Hardness as CaCO3	mg/L	**190**	**190**	**170**		**190**	**150**				
Total Suspended Solids	mg/L	**12.7**	**22.6**	**15.2**		**8.2**	**6.5**				
Total Organic Carbon (TOC)	mg/L	**3.73**	**6.15**	**4.17**		**4.74**	**4.08**				
Total Organic Halides (TOX)	µg/L		**5** j			< 4 U					
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L	**2.25**	**10.25**	**8.40**		**8.20**	**3.25**				
Sulfide (Field Measured)	mg/L	**0.09**	**0.03**	**0.02**		**0.06**	**0.08**				
Temperature	deg C	**13.05**	**9.11**	**10.55**	**9.24**	**11.27**	**9.78**	**9.99**	**18.81**	**11.45**	**16.94**
pH	pH units				**6.82**			**6.67**	**6.31**	**6.60**	**6.55**
pH (Field Measured)	pH units	**6.90**	**6.37**	**7.03**	**6.76**	**6.48**	**6.66**	**6.49**	**6.40**	**6.8**	**6.44**
Electrical Conductivity (Field Measured)	µS/cm	**485**	**640**	**537**	**761**	**429**	**351**	**593**	**408**	**207**	**452**
Electrical Conductivity	umhos/cm				**686**			**481**	**380**	**340**	**436**
Dissolved Oxygen	mg/L	**0.55**	**0.95**	**0.51**	**0.85**	**0.82**	**0.84**	**0.92**	**0.34**	**0**	**0.87**
Oxidation-Reduction Potential	mV	**-31**	**-56**	**-66**	**-60**	**-59**	**-20**	**-25**	**-65**	**-146**	**-105.3**
Salinity	‰				**0.30**			**0.20**	**0.20**	**0.20**	**0.20**
Salinity (Field Measured)	‰	**0.2**	**0.3**	**0.3**	**0.4**	**0.2**	**0.2**	**0.3**	**0.2**	**0.1**	**0.22**
Turbidity	NTU	**6.01**	**4.9**	**5.14**	**0.41**	**1.0**	**4.52**	**7.44**	**1.09**	**1.03**	**0.8**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-31S	MW-31S	MW-31S	MW-31S	MW-31S	MW-31S	MW-31S	MW-31S	MW-31D	MW-31D
Date		12/5/2011	12/5/2011	5/2/2012	5/2/2012	3/12/2014	8/28/2014	4/2/2015	9/3/2015	3/12/2014	8/28/2014
Sample ID		DUP-120511-2	MW-31S-120511	DUP-050212-1	MW-31S-050212	MW-31S-031214	MW-31S-082814	MW-31S-040215	MW-31S-090315	MW-31D-031214	MW-31D-082814
Sample Type		FD	N	FD	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	**60**	**50**		< 50 U	< 50 U	< 50 U	< 50 U	< 5 U	**1390**	**1560**
Dissolved Aluminum	µg/L	< 50 U	< 50 U		< 50 U						
Total Calcium	µg/L	**55600**	**53800**		**68000**	**62000**	**34200**	**51000**	**44200**	**2960**	**2740**
Total Iron	µg/L	**2420**	**2440**		**7510**	**14500**	**7520**	**8840**	**11300**	**4630**	**4730**
Dissolved Iron	µg/L	**2500**	**2500**		**7070**						
Total Magnesium	µg/L	**4180**	**4020**		**6390**	**7590**	**4390**	**6390**	**6650**	**5360**	**5550**
Total Manganese	µg/L	**113**	**112**		**191**	**319**	**204**	**207**	**304**	**60**	**55**
Dissolved Manganese	µg/L	**117**	**114**		**185**						
Total Potassium	µg/L	**4590**	**4440**		**5480**	**5290**	**5540**	**5310**	**6860**	**15800**	**16400**
Total Sodium	µg/L	**4410**	**4360**		**6130**	**6600**	**6310**	**6780**	**8320**	**302000**	**315000**
Nitrate as N	mg/L		**0.2**		< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.007 U	< 0.1 U	< 0.1 U
Nitrite as N	mg/L										
Ammonia as N	mg/L		**0.471**	**0.674**	**0.682**						
Chloride	mg/L		**3.5**		**3.4**	**5.9**	**5.5**	**5.3**	**6.6**	**129**	**137**
Sulfate	mg/L		**19.4**		**11.8**	**8.7**	**0.6**	**9.9**	**0.7**	< 0.1 U	< 0.1 U
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L		**141**		**191**	**208**	**121**	**148**	**157**	**518**	**525**
Bicarbonate Alkalinity as CaCO3	mg/L		**141**		**191**	**208**	**121**	**148**	**157**	**518**	**525**
Carbonate Alkalinity as CaCO3	mg/L		< 1.0 U		< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Hydroxide as CaCO3	mg/L		< 1.0 U		< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Phosphorus	mg/L		**0.384** J		**0.390**	**0.535**	**0.554**	**0.555**	**0.559**	**2.60**	**2.92**
Hardness as CaCO3	mg/L		**150**		**200**	**190**	**100**	**150**	**140**	**29**	**30**
Total Suspended Solids	mg/L		**1.2**		**10.4**	**11.8**	**11.6**	**4.1**	**15.5**	< 1.0 U	< 1.0 U
Total Organic Carbon (TOC)	mg/L		**3.60**		**3.14**	**2.95**	**2.01**	**3.04**	**4.31**	**46.4**	**63.9**
Total Organic Halides (TOX)	µg/L		**6** j								
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L		**0.60**		**7.05**						
Sulfide (Field Measured)	mg/L		**0**		**0.02**						
Temperature	deg C		**10.27**		**14.62**	**11.06**	**19.86**	**12.99**	**21.62**	**10.66**	**16.24**
pH	pH units					**6.47**	**6.35**	**6.47**	**6.48**	**6.90**	**6.92**
pH (Field Measured)	pH units		**6.48**		**6.53**	**6.34**	**6.56**	**6.43**	**6.36**	**6.51**	**6.81**
Electrical Conductivity (Field Measured)	µS/cm		**388**		**411**	**462**	**315**	**174**	**340**	**1260**	**1390**
Electrical Conductivity	umhos/cm					**418**	**254**	**318**	**327**	**1380**	**1420**
Dissolved Oxygen	mg/L		**1.22**		**0.52**	**0.68**	**3.16**	**0.03**	**0.43**	**0.7**	**0.34**
Oxidation-Reduction Potential	mV		**2**		**-18**	**-18**	**-78**	**-150**	**-95.8**	**25**	**-65**
Salinity	‰					**0.20**	**0.10**	**0.10**	**0.20**	**0.70**	**0.70**
Salinity (Field Measured)	‰		**0.2**		**0.2**	**0.2**	**0.1**	**0.1**	**0.16**	**0.6**	**0.7**
Turbidity	NTU		**6.8**		**7.32**	**1.71**	**4.28**	**0.91**	**2.73**	**4.51**	**5.82**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-31D	MW-31D	MW-32S	MW-32S	MW-32DR	MW-33S	MW-33S	MW-33S	MW-33S	MW-33S
Date		4/2/2015	9/3/2015	12/6/2011	5/1/2012	5/1/2012	12/5/2011	5/2/2012	3/6/2014	8/26/2014	8/26/2014
Sample ID		MW-31D-040215	MW-31D-090315	MW-32S-120611	MW-32S-050112	MW-32DR-050112	MW-33S-120511	MW-33S-050212	MW-33S-030614	MW-33S-082614-NP	MW-33S-082614-P
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	NoPurge	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	**1470**	**960**	< 50 U	< 50 U	**870**	**450**	**750**	**630**		**60**
Dissolved Aluminum	µg/L			< 50 U	< 50 U	**330**	**90**	**440**			
Total Calcium	µg/L	**2320**	**2370**	**33000**	**30400**	**10100**	**31200**	**59800**	**70100**		**52200**
Total Iron	µg/L	**4650**	**4060**	**19100**	**25000**	**9080**	**8650**	**12500**	**920**		**13900**
Dissolved Iron	µg/L			**19400**	**25100**	**8460**	**7760**	**9780**			
Total Magnesium	µg/L	**4790**	**5600**	**26600**	**24700**	**16400**	**3890**	**5110**	**1150**		**5130**
Total Manganese	µg/L	**41**	**37**	**819**	**673**	**369**	**278**	**357**	**64**		**368**
Dissolved Manganese	µg/L			**821**	**684**	**339**	**269**	**312**			
Total Potassium	µg/L	**15700**	**17200**	**20500**	**18000**	**14500**	**20200**	**21200**	**20000**		**7530**
Total Sodium	µg/L	**285000**	**319000**	**32300**	**34800**	**211000**	**44800**	**34700**	**20900**		**28400**
Nitrate as N	mg/L	< 0.1 U	< 0.007 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	**0.1**		< 0.1 U
Nitrite as N	mg/L										
Ammonia as N	mg/L										
Chloride	mg/L	**105**	**354**	**7.8**	**7.9**	**97.1**	**3.5**	**3.0**	**2.0**		**3.2**
Sulfate	mg/L	< 0.1 U	< 0.059 U	**0.7**	**4.8**	**0.7**	**0.4**	**7.9**	**1.1**		**1.9**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L	**468**	**476**	**291**	**289**	**434**	**218**	**268**	**136**		**223**
Bicarbonate Alkalinity as CaCO3	mg/L	**468**	**476**	**291**	**289**	**434**	**218**	**268**	**136**		**223**
Carbonate Alkalinity as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U
Hydroxide as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U
Phosphorus	mg/L	**3.39**	**3.73**	**1.23**	**1.73**	**1.28**	**2.60** J	**1.08**	**0.194**		**1.90**
Hardness as CaCO3	mg/L	**26**	**29**	**190**	**180**	**93**	**94**	**170**	**180**		**150**
Total Suspended Solids	mg/L	< 1.0 U	< 0.430 U	**31.8**	**51.0**	**2.4**	**15.0**	**36.4**	**9.8**	**37.1**	**25.8**
Total Organic Carbon (TOC)	mg/L	**61.5**	**59.5**	**8.79**	**8.81**	**24.6**	**10.4**	**7.59**	**3.75**		**2.78**
Total Organic Halides (TOX)	µg/L			**5** j			**7** j	**6** j			
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L			**9.95**	**21.00**	**4.00**	**5.55**	**2.00**			
Sulfide (Field Measured)	mg/L			**0**	**0.01**	**0.05**	**0.06**	**0.12**			
Temperature	deg C	**13.2**	**17.06**	**12.60**	**14.32**	**16.20**	**10.66**	**15.16**	**10.2**		**24.85**
pH	pH units	**6.98**	**7.04**						**10.7**		**6.40**
pH (Field Measured)	pH units	**6.9**	**6.89**	**6.31**	**6.82**	**7.28**	**7.24**	**8.04**	**11.04**		**6.55**
Electrical Conductivity (Field Measured)	µS/cm	**594**	**1338**	**654**	**578**	**1050**	**516**	**511**	**855**		**426**
Electrical Conductivity	umhos/cm	**1160**	**1390**						**300**		**416**
Dissolved Oxygen	mg/L	**0.2**	**0.21**	**0.93**	**0.58**	**0.57**	**0.72**	**0.25**	**4.27**		**0.32**
Oxidation-Reduction Potential	mV	**-141**	**-103**	**-74**	**-65**	**-57**	**-196**	**-269**	**-1**		**-104**
Salinity	‰	**0.60**	**0.70**						**0.10**		**0.20**
Salinity (Field Measured)	‰	**0.3**	**0.67**	**0.3**	**0.3**	**0.5**	**0.2**	**0.2**	**0.4**		**0.2**
Turbidity	NTU	**0.89**	**5.28**	**0.1**	**6.40**	**9.33**	**4.4**	**4.88**	**2.78**		**0.72**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-33S	MW-33S	MW-33S	MW-33S	MW-34S	MW-34S	MW-34S	MW-34S	MW-34S	MW-34S
Date		3/31/2015	3/31/2015	9/1/2015	9/1/2015	12/6/2011	12/6/2011	5/3/2012	3/7/2014	8/27/2014	4/1/2015
Sample ID		MW-33S-033115-NP	MW-33S-033115-P	MW-33S-090115-NP	MW-33S-090115-P	DUP-120611-1	MW-34S-120611	MW-34S-050312	MW-34S-030714	MW-34S-082714	MW-34S-040115
Sample Type		N	N	N	N	FD	N	N	N	N	N
Sample Method		NoPurge	low-flow	NoPurge	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L		**970**		< 70 U		**290**	< 50 U			
Dissolved Aluminum	µg/L						< 50 U	< 50 U			
Total Calcium	µg/L		**103000**		**52600**		**35900**	**39200**			
Total Iron	µg/L		**2440**		**10400**		**140**	< 50 U			
Dissolved Iron	µg/L						< 50 U	< 50 U			
Total Magnesium	µg/L		**4900**		**4510**		**1680**	**1640**			
Total Manganese	µg/L		**102**		**248**		**9**	**1**			
Dissolved Manganese	µg/L						**7**	< 1 U			
Total Potassium	µg/L		**22500**		**9990**		**1390**	**1610**			
Total Sodium	µg/L		**40000**		**20200**		**4330**	**11600**			
Nitrate as N	mg/L		< 0.1 U		**0.3**		**0.4**	**0.2**			
Nitrite as N	mg/L										
Ammonia as N	mg/L					**0.074**	**0.040**	< 0.010 U			
Chloride	mg/L		**4.0**		**6.8**		**2.3**	**4.2**			
Sulfate	mg/L		**5.2**		**7.4**		**9.4**	**6.4**			
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L		**265**		**205**		**93.4**	**121**			
Bicarbonate Alkalinity as CaCO3	mg/L		**231**		**205**		**93.4**	**121**			
Carbonate Alkalinity as CaCO3	mg/L		**34.4**		< 1.0 U		< 1.0 U	< 1.0 U			
Hydroxide as CaCO3	mg/L		< 1.0 U		< 1.0 U		< 1.0 U	< 1.0 U			
Phosphorus	mg/L		**0.988**		**1.88**		**0.192**	< 0.008 U			
Hardness as CaCO3	mg/L		**280**		**150**		**97**	**100**			
Total Suspended Solids	mg/L	< 1.2 U	**19.3**	**35.5**	**12.6**		**1.9**	< 1.1 U			
Total Organic Carbon (TOC)	mg/L		**5.78**		**5.21**		**2.34**	**1.98**			
Total Organic Halides (TOX)	µg/L						**6** j	< 4 U			
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L						**0.15**	**0.06**			
Sulfide (Field Measured)	mg/L						**0.01**	**0**			
Temperature	deg C		**14.37**		**17.96**		**7.99**	**12.13**	**9.26**	**23.15**	**12.06**
pH	pH units		**8.86**		**6.64**				**6.91**	**6.27**	**6.75**
pH (Field Measured)	pH units		**12.67**		**5.97**		**6.36**	**6.95**	**6.87**	**6.29**	**6.85**
Electrical Conductivity (Field Measured)	µS/cm		**535**		**387**		**243**	**240**	**296**	**346**	**121**
Electrical Conductivity	umhos/cm		**595**		**405**				**242**	**319**	**202**
Dissolved Oxygen	mg/L		**0**		**0.34**		**5.77**	**3.01**	**6.29**	**0.9**	**0.89**
Oxidation-Reduction Potential	mV		**-331**		**45.7**		**158**	**231**	**46**	**-76**	**-120**
Salinity	‰		**0.30**		**0.20**				**0.10**	**0.20**	**0.10**
Salinity (Field Measured)	‰		**0.3**		**0.21**		**0.1**	**0.1**	**0.1**	**0.2**	**0.1**
Turbidity	NTU		**53.6**		**2.89**		**6.6**	**0.74**	**1.68**	**0.81**	**0.59**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-34S	MW-35S	MW-35S	MW-35S	MW-35S	MW-35S	MW-35S	MW-35S	MW-35S	MW-35S
Date		9/2/2015	12/6/2011	5/3/2012	3/6/2014	8/27/2014	8/27/2014	4/2/2015	4/2/2015	8/31/2015	8/31/2015
Sample ID		MW-34S-090215	MW-35S-120611	MW-35S-050312	MW-35S-030614	MW-35S-082714-NP	MW-35S-082714-P	MW-35S-040215-NP	MW-35S-040215-P	MW-35S-083115-NP	MW-35S-083115-P
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge	low-flow
Analyte	**Unit**										
WQ Parameters											
Total Aluminum	µg/L		< 50 U	< 50 U	< 50 U		< 50 U		< 50 U		< 8 U
Dissolved Aluminum	µg/L		< 50 U	< 50 U							
Total Calcium	µg/L		**43000**	**33700**	**39500**		**35600**		**39100**		**38500**
Total Iron	µg/L		**4060**	**1860**	**1070**		**6320**		**1810**		**2940**
Dissolved Iron	µg/L		**3940**	**1980**							
Total Magnesium	µg/L		**2720**	**2070**	**4600**		**1800**		**2390**		**1750**
Total Manganese	µg/L		**124**	**49**	**27**		**69**		**39**		**56**
Dissolved Manganese	µg/L		**121**	**48**							
Total Potassium	µg/L		**2760**	**2130**	**2460**		**2800**		**2280**		**2790**
Total Sodium	µg/L		**5580**	**4770**	**10300**		**4800**		**5000**		**5260**
Nitrate as N	mg/L		< 0.1 U	< 0.1 U	**0.3**		< 0.1 U		< 0.1 U		< 0.007 U
Nitrite as N	mg/L										
Ammonia as N	mg/L		**0.207**	**0.091**							
Chloride	mg/L		**3.4**	**2.9**	**4.7**		**7.3**		**4.8**		**3.3**
Sulfate	mg/L		**1.5**	**6.7**	**12.3**		< 0.1 U		**2.7**		**9.6**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L		**121**	**20.1**	**123**		**111**		**108**		**110**
Bicarbonate Alkalinity as CaCO3	mg/L		**121**	**20.1**	**123**		**111**		**108**		**110**
Carbonate Alkalinity as CaCO3	mg/L		< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U		< 1.0 U		< 1.0 U
Hydroxide as CaCO3	mg/L		< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U		< 1.0 U		< 1.0 U
Phosphorus	mg/L		**0.252**	**0.136**	**0.063**		**0.391**		**0.139**		**2.41**
Hardness as CaCO3	mg/L		**120**	**93**	**120**		**96**		**110**		**100**
Total Suspended Solids	mg/L		**2.3**	**3.6**	< 1.0 U	**2.9**	**2.6**	< 1.0 U	< 1.0 U	**6.0**	**2.7**
Total Organic Carbon (TOC)	mg/L		**2.68**	**2.21**	**1.71**		**2.23**		**2.15**		**2.36**
Total Organic Halides (TOX)	µg/L		< 4 U	< 4 U							
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L		**2.55**	**1.89**							
Sulfide (Field Measured)	mg/L		**0.02**	**0.01**							
Temperature	deg C	**20.49**	**8.96**	**11.24**	**10.77**		**19.78**		**13.96**		**18.57**
pH	pH units	**6.55**			**6.64**		**6.24**		**6.51**		**6.30**
pH (Field Measured)	pH units	**6.39**	**6.28**	**6.68**	**6.94**		**6.26**		**6**		**6.32**
Electrical Conductivity (Field Measured)	µS/cm	**336**	**286**	**196**	**350**		**266**		**123**		**312**
Electrical Conductivity	umhos/cm	**327**			**278**		**487**		**226**		**249**
Dissolved Oxygen	mg/L	**0.36**	**1.21**	**0.12**	**1.52**		**0.92**		**0.16**		**0.4**
Oxidation-Reduction Potential	mV	**-94.7**	**-12**	**-71**	**13**		**-87**		**-53**		**-70.3**
Salinity	‰	**0.20**			**0.10**		**0.20**		**0.10**		**0.10**
Salinity (Field Measured)	‰	**0.16**	**0.1**	**0.1**	**0.2**		**0.1**		**0.1**		**0.15**
Turbidity	NTU	**0.37**	**2.2**	**0.86**	**2.01**		**1.83**		**1.78**		**2.8**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-35D	MW-35D	MW-35D	MW-35D	MW-35D	MW-35D	MW-35D	MW-35D	MW-36S	MW-38D
Date		3/6/2014	3/26/2014	8/27/2014	8/27/2014	4/1/2015	4/1/2015	8/31/2015	8/31/2015	5/3/2012	3/14/2014
Sample ID		MW-35D-030614	MW-35D-032614	MW-35D-082714-NP	MW-35D-082714-P	MW-35D-040115-NP	MW-35D-040115-P	MW-35D-083115-NP	MW-35D-083115-P	MW-36S-050312	MW-38D-031414
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge	low-flow	low-flow	low-flow
Analyte	Unit										
WQ Parameters											
Total Aluminum	µg/L	**840**			**770**		**860**		**830**	< 50 U	**480**
Dissolved Aluminum	µg/L									< 50 U	
Total Calcium	µg/L	**4280**			**4250**		**4210**		**4030**	**47900**	**16400**
Total Iron	µg/L	**7750**			**6060**		**5570**		**5530**	**8030**	**14400**
Dissolved Iron	µg/L									**8320**	
Total Magnesium	µg/L	**10600**			**11500**		**11600**		**10600**	**20000**	**48700**
Total Manganese	µg/L	**124**			**101**		**91**		**84**	**329**	**412**
Dissolved Manganese	µg/L									**315**	
Total Potassium	µg/L	**15200**			**15300**		**16100**		**14500**	**6840**	**23200**
Total Sodium	µg/L	**297000**			**286000**		**296000**		**271000**	**22700**	**165000**
Nitrate as N	mg/L	< 0.1 U			< 0.1 U		< 0.1 U		< 0.007 U	< 0.1 U	< 0.1 U
Nitrite as N	mg/L										
Ammonia as N	mg/L										
Chloride	mg/L	**117**			**121**		**150**		**78.0**	**6.4**	**119**
Sulfate	mg/L	< 0.1 U			< 0.1 U		< 0.1 U		< 0.059 U	**14.8**	< 0.1 U
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L	**517**			**502**		**448**		**544**	**220**	**406**
Bicarbonate Alkalinity as CaCO3	mg/L	**517**			**502**		**448**		**544**	**220**	**406**
Carbonate Alkalinity as CaCO3	mg/L	< 1.0 U			< 1.0 U		< 1.0 U		< 1.0 U	< 1.0 U	< 1.0 U
Hydroxide as CaCO3	mg/L	< 1.0 U			< 1.0 U		< 1.0 U		< 1.0 U	< 1.0 U	< 1.0 U
Phosphorus	mg/L	**0.482**			**4.49**		**4.67**		**2.33**	**0.126**	**0.915**
Hardness as CaCO3	mg/L	**54**			**58**		**58**		**54**	**200**	**240**
Total Suspended Solids	mg/L	**3.2**	< 1.1 U	**1.0**	**1.1**	**1.6**	< 1.0 U	< 0.440 U	< 0.430 U	**9.3**	**1.8**
Total Organic Carbon (TOC)	mg/L	**30.4**			**40.5**		**41.5**		**59.3**	**2.70**	**41.3**
Total Organic Halides (TOX)	µg/L									< 4 U	
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L									**5.75**	
Sulfide (Field Measured)	mg/L									**0.03**	
Temperature	deg C	**12.04**			**18.19**		**12.56**		**13.94**	**10.65**	**12.21**
pH	pH units	**7.31**			**6.91**		**7.06**		**7.17**		**6.65**
pH (Field Measured)	pH units	**6.94**			**6.99**		**7.24**		**7.03**	**6.53**	**6.53**
Electrical Conductivity (Field Measured)	µS/cm	**1500**			**1320**		**737**		**1453**	**402**	**1250**
Electrical Conductivity	umhos/cm	**1290**			**1300**		**1270**		**1200**		**1080**
Dissolved Oxygen	mg/L	**0.74**			**0.23**		**0**		**0.35**	**0.63**	**0.61**
Oxidation-Reduction Potential	mV	**-113**			**-156**		**-196**		**-127.1**	**-81**	**-44**
Salinity	‰	**0.60**			**0.60**		**0.60**		**0.60**		**0.50**
Salinity (Field Measured)	‰	**0.7**			**0.7**		**0.4**		**0.73**	**0.2**	**0.6**
Turbidity	NTU	**5.3**			**4.65**		**4.58**		**4.98**	**0.17**	**3.86**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters

Groundwater Sampling

5900 West Marginal Way Site

Seattle, Washington

Location		MW-38D	MW-38D	MW-38D	MW-43S	MW-43S	MW-43S	MW-43S	MW-43S	MW-43S	MW-43S
Date		8/29/2014	4/3/2015	9/2/2015	3/4/2014	8/25/2014	8/25/2014	3/30/2015	3/30/2015	9/3/2015	9/3/2015
Sample ID		MW-38D-082914	MW-38D-040315	MW-38D-090215	MW-43S-030414	MW-43S-082514-NP	MW-43S-082514-P	MW-43S-033015-NP	MW-43S-033015-P	MW-43S-090315-NP	MW-43S-090315-P
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		low-flow	low-flow	low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge	low-flow
Analyte	**Unit**										
WQ Parameters											
Total Aluminum	µg/L	**590**	**320**	**120**	< 50 U		< 50 U		< 50 U		< 5 U
Dissolved Aluminum	µg/L										
Total Calcium	µg/L	**13800**	**12600**	**13000**	**48300**		**59700**		**51000**		**74100**
Total Iron	µg/L	**11200**	**9020**	**8660**	**6960**		**6880**		**6430**		**7340**
Dissolved Iron	µg/L										
Total Magnesium	µg/L	**39200**	**36400**	**38900**	**6100**		**6720**		**6130**		**7720**
Total Manganese	µg/L	**329**	**284**	**296**	**247**		**273**		**231**		**294**
Dissolved Manganese	µg/L										
Total Potassium	µg/L	**21000**	**21800**	**22000**	**6330**		**7620**		**6770**		**9100**
Total Sodium	µg/L	**172000**	**176000**	**162000**	**19300**		**25900**		**23800**		**29300**
Nitrate as N	mg/L	< 0.1 U	< 0.1 U	< 0.007 U	< 0.1 U		< 0.1 U		< 0.1 U		< 0.007 U
Nitrite as N	mg/L										
Ammonia as N	mg/L										
Chloride	mg/L	**127**	**174**	**434**	**5.9**		**7.1**		**6.0**		**7.4**
Sulfate	mg/L	< 0.1 U	**0.1**	**0.4**	< 0.1 U		**7.7**		**0.3**		**9.3**
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L	**411**	**332**	**317**	**193**		**238**		**197**		**268**
Bicarbonate Alkalinity as CaCO3	mg/L	**411**	**332**	**317**	**193**		**238**		**197**		**268**
Carbonate Alkalinity as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U		< 1.0 U		< 1.0 U
Hydroxide as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U		< 1.0 U		< 1.0 U
Phosphorus	mg/L	**0.932**	**1.58**	**0.714**	**1.25**		**1.29** J		**1.26**		**1.10**
Hardness as CaCO3	mg/L	**200**	**180**	**190**	**150**		**180**		**150**		**220**
Total Suspended Solids	mg/L	**1.9**	**1.7**	< 0.426 U	**11.0**	**18.7**	**27.2**	**13.7**	**14.2**	**15.5**	**14.5**
Total Organic Carbon (TOC)	mg/L	**50.4**	**24.2**	**19.0**	**3.00**		**4.16**		**3.45**		**4.47**
Total Organic Halides (TOX)	µg/L										
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L										
Sulfide (Field Measured)	mg/L										
Temperature	deg C	**15.26**	**13.14**	**18.15**	**11.52**		**17.47**		**14.16**		**16.7**
pH	pH units	**6.68**	**6.86**	**6.79**	**6.34**		**6.22**		**6.46**		**6.62**
pH (Field Measured)	pH units	**6.60**	**6.77**	**6.62**	**6.46**		**5.82**		**6.39**		**6.48**
Electrical Conductivity (Field Measured)	µS/cm	**1230**	**619**	**1210**	**1060**		**514**		**437**		**540**
Electrical Conductivity	umhos/cm	**1130**	**1070**	**1190**	**372**		**462**		**390**		**538**
Dissolved Oxygen	mg/L	**0**	**0**	**0.38**	**1.47**		**0**		**0**		**0.68**
Oxidation-Reduction Potential	mV	**-122**	**-135**	**55.4**	**-66**		**-56**		**-93**		**-38.2**
Salinity	‰	**0.60**	**0.50**	**0.60**	**0.20**		**0.20**		**0.20**		**0.30**
Salinity (Field Measured)	‰	**0.6**	**0.3**	**0.61**	**0.5**		**0.2**		**0.2**		**0.26**
Turbidity	NTU	**6.04**	**2.23**	**3.87**	**3.48**		**1.68**		**0.99**		**0.47**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

	Location	MW-43D	MW-43D	MW-43D	MW-43D	MW-45S	MW-45S	MW-45S	MW-45S	MW-45S
	Date	3/4/2014	8/25/2014	3/30/2015	9/3/2015	3/11/2014	8/26/2014	8/26/2014	3/31/2015	3/31/2015
	Sample ID	MW-43D-030414	MW-43D-082514	MW-43D-033015	MW-43D-090315	MW-45S-031114	MW-45S-082614-NP	MW-45S-082614-P	MW-45S-033115-NP	MW-45S-033115-P
	Sample Type	N	N	N	N	N	N	N	N	N
	Sample Method	low-flow	low-flow	low-flow	low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow
Analyte	Unit									
WQ Parameters										
Total Aluminum	µg/L	**470**	**330**	**490**	**400**	**70**		< 50 U		< 50 U
Dissolved Aluminum	µg/L									
Total Calcium	µg/L	**11800**	**14600**	**17700**	**18600**	**56100**		**80300**		**70000**
Total Iron	µg/L	**8840**	**8070**	**9210**	**9090**	**18700**		**14700**		**18300**
Dissolved Iron	µg/L									
Total Magnesium	µg/L	**21400**	**23700**	**28600**	**27100**	**9970**		**13000**		**11400**
Total Manganese	µg/L	**390**	**304**	**347**	**340**	**363**		**420**		**356**
Dissolved Manganese	µg/L									
Total Potassium	µg/L	**15000**	**15100**	**17700**	**17300**	**8780**		**10700**		**11200**
Total Sodium	µg/L	**168000**	**159000**	**178000**	**180000**	**43600**		**53700**		**58100**
Nitrate as N	mg/L	< 0.1 U	< 0.1 U	**0.1**	< 0.007 U	< 0.1 U		< 0.1 U		< 0.1 U
Nitrite as N	mg/L									
Ammonia as N	mg/L									
Chloride	mg/L	**35.2**	**36.7**	**33.6**	**32.2**	**5.3**		**7.9**		**6.0**
Sulfate	mg/L	< 0.1 U	< 0.1 U	**0.3**	< 0.059 U	**5.5**		**6.8**		**9.0**
Sulfide	mg/L									
Total Alkalinity as CaCO3	mg/L	**457**	**442**	**486**	**493**	**289**		**354**		**335**
Bicarbonate Alkalinity as CaCO3	mg/L	**457**	**442**	**486**	**493**	**289**		**354**		**335**
Carbonate Alkalinity as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U		< 1.0 U
Hydroxide as CaCO3	mg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U		< 1.0 U		< 1.0 U
Phosphorus	mg/L	**0.110**	**1.02** J	**1.11**	**1.05**	**4.38**		**8.11**		**6.84**
Hardness as CaCO3	mg/L	**120**	**130**	**160**	**160**	**180**		**250**		**220**
Total Suspended Solids	mg/L	< 1.0 U	**1.0**	< 1.0 U	< 0.435 U	**31.9**	**36.0**	**23.0**	**39.8**	**35.6**
Total Organic Carbon (TOC)	mg/L	**23.2**	**28.1**	**36.1**	**37.2**	**6.80**		**7.92**		**7.82**
Total Organic Halides (TOX)	µg/L									
Chemical Oxygen Demand (COD)	mg/L									
Field Parameters										
Ferrous Iron (Field Measured)	mg/L									
Sulfide (Field Measured)	mg/L									
Temperature	deg C	**11.1**	**17.47**	**14.25**	**15.35**	**10.96**		**25.52**		**11.53**
pH	pH units	**6.42**	**6.51**	**6.62**	**6.65**	**6.28**		**6.44**		**6.43**
pH (Field Measured)	pH units	**6.52**	**6.36**	**6.64**	**6.55**	**6.23**		**6.39**		**6.75**
Electrical Conductivity (Field Measured)	µS/cm	**465**	**948**	**1040**	**981**	**662**		**722**		**358**
Electrical Conductivity	umhos/cm	**894**	**901**	**947**	**977**	**545**		**676**		**625**
Dissolved Oxygen	mg/L	**3.09**	**0**	**4.92**	**0.53**	**0.69**		**2.47**		**0**
Oxidation-Reduction Potential	mV	**-50**	**-87**	**-134**	**25.9**	**-7**		**-114**		**-141**
Salinity	‰	**0.40**	**0.40**	**0.50**	**0.50**	**0.30**		**0.30**		**0.30**
Salinity (Field Measured)	‰	**0.2**	**0.5**	**0.5**	**0.49**	**0.3**		**0.4**		**0.2**
Turbidity	NTU	**0.5**	**4.62**	**2.2**	**2.55**	**2**		**2.47**		**1.44**

PUBLIC REVIEW DRAFT
Table Z-1
Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Location		MW-45S	MW-45S	MW-45D	MW-45D	MW-45D	MW-45D	MW-45D	MW-45D	MW-45D	MW-45D
Date		9/1/2015	9/1/2015	3/11/2014	3/26/2014	8/26/2014	8/26/2014	3/31/2015	3/31/2015	9/1/2015	9/1/2015
Sample ID		MW-45S-090115-NP	MW-45S-090115-P	MW-45D-031114	MW-45D-032614	MW-45D-082614-NP	MW-45D-082614-P	MW-45D-033115-NP	MW-45D-033115-P	MW-45D-090115-NP	MW-45D-090115-P
Sample Type		N	N	N	N	N	N	N	N	N	N
Sample Method		NoPurge	low-flow	low-flow	low-flow	NoPurge	low-flow	NoPurge	low-flow	NoPurge	low-flow
Analyte	**Unit**										
WQ Parameters											
Total Aluminum	µg/L		< 50 U	< 50 U			< 50 U		< 50 U		< 50 U
Dissolved Aluminum	µg/L										
Total Calcium	µg/L		**60800**	**31700**			**48400**		**66600**		**42300**
Total Iron	µg/L		**13000**	**23000**			**19200**		**18300**		**11800**
Dissolved Iron	µg/L										
Total Magnesium	µg/L		**12100**	**36800**			**56000**		**55500**		**37500**
Total Manganese	µg/L		**354**	**732**			**822**		**965**		**647**
Dissolved Manganese	µg/L										
Total Potassium	µg/L		**10400**	**21300**			**26500**		**31300**		**24100**
Total Sodium	µg/L		**52900**	**275000**			**274000**		**343000**		**292000**
Nitrate as N	mg/L		< 0.007 U	< 0.1 U			< 0.1 U		< 0.1 U		< 0.007 U
Nitrite as N	mg/L										
Ammonia as N	mg/L										
Chloride	mg/L		**6.5**	**275**			**329**		**449**		**231**
Sulfate	mg/L		**4.6**	< 0.1 U			< 0.1 U		< 0.1 U		< 0.059 U
Sulfide	mg/L										
Total Alkalinity as CaCO3	mg/L		**318**	**480**			**536**		**512**		**631**
Bicarbonate Alkalinity as CaCO3	mg/L		**318**	**480**			**536**		**512**		**631**
Carbonate Alkalinity as CaCO3	mg/L		< 1.0 U	< 1.0 U			< 1.0 U		< 1.0 U		< 1.0 U
Hydroxide as CaCO3	mg/L		< 1.0 U	< 1.0 U			< 1.0 U		< 1.0 U		< 1.0 U
Phosphorus	mg/L		**6.24**	**1.40**			**1.27**		**1.31**		**1.39**
Hardness as CaCO3	mg/L		**200**	**230**			**350**		**400**		**260**
Total Suspended Solids	mg/L	**30.6**	**26.5**	**61.2**	**54.9**	**36.2**	**43.5**	**42.0**	**16.4**	**29.2**	< 0.435 U
Total Organic Carbon (TOC)	mg/L		**7.03**	**14.3**			**16.5**		**13.0**		**20.6**
Total Organic Halides (TOX)	µg/L										
Chemical Oxygen Demand (COD)	mg/L										
Field Parameters											
Ferrous Iron (Field Measured)	mg/L										
Sulfide (Field Measured)	mg/L										
Temperature	deg C		**17.85**	**11.16**			**22.87**		**12.64**		**14.66**
pH	pH units		**6.38**	**6.69**			**6.55**		**6.61**		**6.71**
pH (Field Measured)	pH units		**6.34**	**6.47**			**6.61**		**6.89**		**6.53**
Electrical Conductivity (Field Measured)	µS/cm		**627**	**2030**			**1890**		**1250**		**1764**
Electrical Conductivity	umhos/cm		**620**	**1700**			**1850**		**2200**		**1790**
Dissolved Oxygen	mg/L		**0.44**	**0.74**			**0.46**		**0**		**0.39**
Oxidation-Reduction Potential	mV		**-106.2**	**-75**			**-138**		**-186**		**-117.3**
Salinity	‰		**0.30**	**0.90**			**0.90**		**1.10**		**0.90**
Salinity (Field Measured)	‰		**0.31**	**1**			**1.0**		**0.6**		**0.9**
Turbidity	NTU		**0.82**				**3.75**		**0.64**		**1.29**

PUBLIC REVIEW DRAFT

Table Z-1

Summary of Water Quality Parameters
Groundwater Sampling
5900 West Marginal Way Site
Seattle, Washington

Notes:
Empty cells = not analyzed
***Bold** text = indicates that compound was detected*
low flow = sample collected following standard low-flow techniques, as described in RI/FS Work Plan Addendum dated September 2013
no purge = sample collected prior to low-flow purge as described in the RI/FS Work Plan Addendum dated September 2013
Shallow (S) = refers to shallow groundwater monitoring wells screened at the water table
Deep (D) = refers to deeper groundwater at the Site
‰ = parts per mille (thousand)
deg C = degrees Celsius
FD/dup = field duplicate sample
mg/L = milligrams per liter
mV = millivolts
MW = monitoring well
N = normal field sample
NTU = nephelometric turbidity units
µS/cm = microsiemens per centimeter
µg/L = micrograms per liter
umhos/cm = micromhos per centimeter
WQ = water quality

Laboratory Data Qualifiers:
j = The value reported is less than the reporting limit and should be considered an estimate; qualifier reported by the laboratory.
J = The detected results are qualified as estimated in accordance with National Functional Guidelines (NFGs).
N = There is presumptive evidence that the analyte is present.
U = Result is ≤ the laboratory detection limit or qualified as non-detect in accordance with NFGs.
UJ = Non-detected compound qualified as estimated in accordance with NFGs.

APPENDIX AA ANALYTICAL SUMMARY TABLE FOR SEEP DATA

PUBLIC REVIEW DRAFT
Table AA-1
Seep Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

		Location ID			SW-01 [1]	SW-02 [1]	SW-03 [1]	SP-61 [2]	SP-61 [2]	SP-62 [2]	SP-62 [2]
		Sample Date			5/15/1995	5/15/1995	5/15/1995	7/2/2004	7/2/2004	7/30/2004	7/2/2004
Constituent	Units	Most Stringent GW Screening Level [3]	Screening Level for Groundwater - Protective of Surface Water	Screening Level for Groundwater - Protective of Sediment					Filtered		Filtered
Metals (mg/L)											
Arsenic	mg/L	8.00E-03	1.40E-04	2.21E-01	**0.082**	**0.03**	**0.03**	**0.0672**	**0.0724**		**0.00684**
Cadmium	mg/L	1.20E-03	7.90E-03	1.19E-03				**2.20E-05**	**9.00E-06**		**1.09E-04**
Chromium	mg/L	0.1	na	na				0.00007 U	0.00183 U		0.00773 U
Copper	mg/L	3.10E-03	3.10E-03	1.37E-02				0.00475 U	0.00472 U		0.00777 U
Lead	mg/L	8.10E-03	8.10E-03	1.93E-02				**2.40E-04**	**8.80E-05**		**1.01E-04**
Mercury	mg/L	2.50E-05	2.50E-05	2.04E+00				**0.00000216**	**0.00000099** J		**0.00000256**
Nickel	mg/L	8.20E-03	8.20E-03	2.31E+00				0.00004 U	0.00004 U		0.00004 U
Silver	mg/L	1.90E-03	1.90E-03	5.52E-02	0.001 U	0.001 U	0.001 U	**3.00E-05**	**2.70E-05**		**4.40E-05**
Zinc	mg/L	8.10E-02	8.10E-02	0.77				**3.49E-03**	**3.29E-03**		**1.22E-02**
SVOCs (µg/L)											
Pentachlorophenol	µg/L	2.00E-03	2.00E-03	8.77E-01	1 U	1 U	1 U	5 U	5 U		5 U
2,4,5-Trichlorophenol	µg/L	6.00E+02	6.00E+02	5.66E+04				5 U	5 U		5 U
2,4,6-Trichlorophenol	µg/L	2.80E-01	2.80E-01	5.90E+02				5 U	5 U		5 U
2,4-Dichlorophenol	µg/L	1.00E+01	1.00E+01	6.98E+03				3 U	3 U		3 U
2-Chlorophenol	µg/L	1.70E+01	1.70E+01	2.95E+03				1 U	1 U		1 U
Phenol	µg/L	3.65E+02	7.00E+04	3.65E+02				2 U	2 U		2 U
2,4-Dimethylphenol	µg/L	6.34E+00	9.70E+01	6.34E+00				3 U	3 U		3 U
2,4-Dinitrophenol	µg/L	3.20E+01	1.00E+02	5.51E+05				25 U	25 U		25 U
2,4-Dinitrotoluene	µg/L	1.80E-01	1.80E-01	1.14E+03				5 U	5 U		5 U
2,6-Dinitrotoluene	µg/L	5.83E-02	na	2.97E+02				5 U	5 U		5 U
2-Chloronaphthalene	µg/L	1.00E+02	1.00E+02	na				1 U	1 U		1 U
2-Methylnaphthalene	µg/L	3.20E+01	na	na				1 U	1 U		1 U
2-Methylphenol	µg/L	2.70E+01	na	2.70E+01				1 U	1 U		1 U
2-Nitroaniline	µg/L	1.60E+02	na	na				5 U	5 U		5 U
2-Nitrophenol	µg/L	na	na	na				5 U	5 U		5 U
3,3'-Dichlorobenzidine	µg/L	3.30E-03	3.30E-03	1.32E+02				5 U	5 U		5 U
3-Nitroaniline	µg/L	na	na	na				6 U	6 U		6 U
4,6-Dinitro-o-cresol	µg/L	7.00E+00	7.00E+00	na				15 U	15 U		15 U
4-Bromophenyl phenyl ether	µg/L	na	na	na				1 U	1 U		1 U
4-Chloro-3-methylphenol	µg/L	3.60E+01	3.60E+01	na				2 U	2 U		2 U
4-Chloroaniline	µg/L	2.19E-01	na	2.30E+03				3 U	3 U		3 U
4-Chlorophenyl phenyl ether	µg/L	na	na	na				1 U	1 U		1 U
4-Methylphenol	µg/L	8.00E+02	na	na				1 U	1 U		1 U
4-Nitroaniline	µg/L	na	na	na				5 U	5 U		5 U
4-Nitrophenol	µg/L	na	na	na				5 U	5 U		5 U
Benzoic acid	µg/L	5.89E+02	na	5.89E+02				10 U	10 U		10 U
Benzyl alcohol	µg/L	8.00E+02	na	na				5 U	5 U		5 U
bis(2-chloroethoxy)methane	µg/L	na	na	na				1 U	1 U		1 U
bis(2-chloroethyl)ether	µg/L	3.98E-02	6.00E-02	3.79E+02				2 U	2 U		2 U
bis(2-chloroisopropyl)ether	µg/L	3.20E+02	9.00E+02	na				1 U	1 U		1 U
Bis(2-ethylhexyl)phthalate	µg/L	4.60E-02	4.60E-02	6.16E-01				3.1 BU			1 BU
Butyl benzyl phthalate	µg/L	1.30E-02	1.30E-02	2.41E-01				1 U	1 U		1 U
Carbazole	µg/L	na	na	na				1 U	1 U		1 U

PUBLIC REVIEW DRAFT
Table AA-1
Seep Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

		Location ID			SW-01 [1]	SW-02 [1]	SW-03 [1]	SP-61 [2]	SP-61 [2]	SP-62 [2]	SP-62 [2]
		Sample Date			5/15/1995	5/15/1995	5/15/1995	7/2/2004	7/2/2004	7/30/2004	7/2/2004
Constituent	Units	Most Stringent GW Screening Level [3]	Screening Level for Groundwater - Protective of Surface Water	Screening Level for Groundwater - Protective of Sediment					Filtered		Filtered
Dibenzofuran	µg/L	1.60E+01	na	na				1 U	1 U		1 U
Diethyl phthalate	µg/L	9.26E+01	2.00E+02	9.26E+01				1 U	1 U		1 U
Dimethyl phthalate	µg/L	6.00E+02	6.00E+02	na				1 U	1 U		1 U
Di-n-butyl phthalate	µg/L	8.00E+00	8.00E+00	4.60E+01				1 U	3.8 U		1 U
Di-n-octyl phthalate	µg/L	3.92E-03	na	3.92E-03				1 U	1 U		1 U
Hexachloroethane	µg/L	2.00E-02	2.00E-02	6.20E+02				2 U	2 U		2 U
Isophorone	µg/L	4.61E+01	1.10E+02	6.02E+05				1 U	1 U		1 U
Nitrobenzene	µg/L	1.60E+01	1.00E+02	1.18E+05				1 U	1 U		1 U
N-Nitroso-di-n-propylamine	µg/L	1.25E-02	5.80E-02	1.15E+02				2 U	2 U		2 U
N-Nitrosodiphenylamine	µg/L	6.90E-01	6.90E-01	1.11E+00				1 U	1 U		1 U
PAHs (µg/L)											
Acenaphthene	µg/L	5.34E+00	3.00E+01	5.34E+00				1 U	1 U		1 U
Acenaphthylene	µg/L	na	na	na				1 U	1 U		1 U
Anthracene	µg/L	2.15E+00	1.00E+02	2.15E+00				1 U	1 U		1 U
Benzo(a)anthracene	µg/L	1.60E-04	1.60E-04	1.91E-01				1 U	1 U		1 U
Benzo(a)pyrene	µg/L	1.60E-05	1.60E-05	8.69E-02				1 U	1 U		1 U
Benzo(g,h,i)perylene	µg/L	na	na	na				1 U	1 U		1 U
Chrysene	µg/L	1.60E-02	1.60E-02	1.85E-01				1 U	1 U		1 U
Dibenzo(a,h)anthracene	µg/L	1.60E-05	1.60E-05	6.77E-03				1 U	1 U		1 U
Fluoranthene	µg/L	1.82E+00	6.00E+00	1.82E+00				1 U	1 U		1 U
Fluorene	µg/L	3.67E+00	1.00E+01	3.67E+00				1 U	1 U		1 U
Indeno(1,2,3-cd)pyrene	µg/L	1.60E-04	1.60E-04	9.10E-03				1 U	1 U		1 U
Phenanthrene	µg/L	na	na	na				1 U	1 U		1 U
Pyrene	µg/L	2.01E+00	8.00E+00	2.01E+00				1 U	1 U		1 U
Benzo(b)fluoranthene	µg/L	1.60E-04	1.60E-04	na				1 U	1 U		1 U
Benzo(k)fluoranthene	µg/L	1.60E-03	1.60E-03	na				1 U	1 U		1 U
Benzofluoranthenes (total-calc'd)	µg/L	na	na	na				1 U	1 U		1 U
Total HPAH (calc'd)	µg/L	na	na	na				1 U	1 U		1 U
Total LPAH (calc'd)	µg/L	na	na	na				1 U	1 U		1 U
Total PAH (calc'd)	µg/L	na	na	na				1 U	1 U		1 U
Carcinogenic PAHs (ND= 1/2DL)	µg/L	1.60E-05	1.60E-05	4.89E-03				0.91 U	0.91 U		0.91 U
PCBs (µg/L)											
Aroclor-1016	µg/L							0.02 U	0.017 U		0.017 U
Aroclor-1221	µg/L							0.02 U	0.017 U		0.017 U
Aroclor-1232	µg/L							0.02 U	0.017 U		0.017 U
Aroclor-1242	µg/L							0.02 U	0.017 U		0.017 U
Aroclor-1248	µg/L							0.02 U	0.017 U		0.017 U
Aroclor-1254	µg/L							0.02 U	0.017 U		0.017 U
Aroclor-1260	µg/L							0.02 U	0.017 U		0.017 U
Total PCB Aroclors	µg/L	7.00E-06	7.00E-06	2.18E-02				0.02 U	0.017 U		0.017 U
TPH (mg/L)											
Diesel Range Organics	mg/L	500	na	na	0.25 U	0.25 U					
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	µg/L	1.68E+00	na	na				1 U		1 UJ	

PUBLIC REVIEW DRAFT
Table AA-1
Seep Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

		Location ID			SW-01 [1]	SW-02 [1]	SW-03 [1]	SP-61 [2]	SP-61 [2]	SP-62 [2]	SP-62 [2]
		Sample Date			5/15/1995	5/15/1995	5/15/1995	7/2/2004	7/2/2004	7/30/2004	7/2/2004
Constituent	Units	Most Stringent GW Screening Level [3]	Screening Level for Groundwater - Protective of Surface Water	Screening Level for Groundwater - Protective of Sediment					Filtered		Filtered
1,1,1-Trichloroethane	µg/L	2.00E+02	5.00E+04	na				1 U		1 UJ	
1,1,2,2-Tetrachloroethane	µg/L	2.19E-01	3.00E-01	na				1 U		1 UJ	
1,1,2-Trichloroethane	µg/L	9.00E-01	9.00E-01	na				1 U		1 UJ	
1,1,2-Trichlorotrifluoroethane	µg/L	1.83E+02	na	na				2 U		2 UJ	
1,1-Dichloroethane	µg/L	7.68E+00	na	na				1 U		1 UJ	
1,1-Dichloroethene	µg/L	7.00E+00	4.00E+03	na				1 U		1 UJ	
1,1-Dichloropropene	µg/L	na	na	na				1 U		1 UJ	
1,2,3-Trichlorobenzene	µg/L	na	na	na				5 U		5 UJ	
1,2,3-Trichloropropane	µg/L	1.46E-03	na	na				3 U		3 UJ	
1,2,4-Trichlorobenzene	µg/L	3.70E-02	3.70E-02	9.64E-01				1 U	1 U	5 UJ	1 U
1,2,4-Trimethylbenzene	µg/L	8.00E+01	na	na				1 U		1 UJ	
1,2-Dichlorobenzene	µg/L	4.61E+00	8.00E+02	4.61E+00				1 U	1 U	1 UJ	1 U
1,2-Dichloroethane	µg/L	4.22E+00	7.30E+01	na				1 U		1 UJ	
1,2-Dichloropropane	µg/L	3.10E+00	3.10E+00	na				1 U		1 UJ	
1,3,5-Trimethylbenzene	µg/L	8.00E+01	na	na				1 U		1 UJ	
1,3-Dichlorobenzene	µg/L	2.00E+00	2.00E+00	na				1 U	1 U	1 UJ	1 U
1,3-Dichloropropane	µg/L	na	na	na				1 U		1 UJ	
1,4-Dichlorobenzene	µg/L	4.93E+00	5.98E+01	8.94E+00				1 U	1 U	1 UJ	1 U
1,4-Dioxane	µg/L	4.38E-01	na	na				1 U	1 U		1 U
2,2-Dichloropropane	µg/L	na	na	na				1 U		1 UJ	
2-Chlorotoluene	µg/L	1.60E+02	na	na				1 U		1 UJ	
2-Hexanone	µg/L	4.00E+01	na	na				5 U		5 UJ	
4-Chlorotoluene	µg/L	na	na	na				1 U		1 UJ	
Acetone	µg/L	7.20E+03	na	na				5 U		5 UJ	
Acrolein	µg/L	1.10E+00	1.10E+00	na				50 U		50 UJ	
Acrylonitrile	µg/L	2.80E-02	2.80E-02	na				1 U		1 UJ	
Benzene	µg/L	1.60E+00	1.60E+00	na				1 U		1 UJ	
Bromobenzene	µg/L	6.40E+01	na	na				1 U		1 UJ	
Bromochloromethane	µg/L	na	na	na				1 U		1 UJ	
Bromodichloromethane	µg/L	1.82E+00	2.80E+00	na				1 U		1 UJ	
Bromoethane	µg/L	na	na	na				2 U		2 UJ	
Bromoform	µg/L	1.20E+01	1.20E+01	na				1 U		1 UJ	
Bromomethane	µg/L	1.12E+01	2.68E+02	na				1 UJ		1 UJ	
Carbon disulfide	µg/L	3.99E+02	na	na				1 U		1 UJ	
Carbon tetrachloride	µg/L	3.50E-01	3.50E-01	na				1 U		1 UJ	
Chlorobenzene	µg/L	1.00E+02	2.00E+02	na				1 U		1 UJ	
Chloroethane	µg/L	1.85E+04	na	na				1 U		1 UJ	
Chloroform	µg/L	1.19E+00	1.54E+02	na				1 U		1 UJ	
Chloromethane	µg/L	1.53E+02	na	na				1 U		1 UJ	
cis-1,2-Dichloroethene	µg/L	1.60E+01	na	na				1 U		1 UJ	
cis-1,3-Dichloropropene	µg/L	4.38E-01	2.00E+00	na				1 U		1 UJ	
Dibromochloromethane	µg/L	2.20E+00	2.20E+00	na				1 U		1 UJ	
Dibromomethane	µg/L	8.00E+01	na	na				1 U		1 UJ	
Dichloromethane	µg/L	5.00E+00	1.00E+02	na				2 U		2 UJ	

PUBLIC REVIEW DRAFT
Table AA-1
Seep Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

		Location ID			SW-01 [1]	SW-02 [1]	SW-03 [1]	SP-61 [2]	SP-61 [2]	SP-62 [2]	SP-62 [2]
		Sample Date			5/15/1995	5/15/1995	5/15/1995	7/2/2004	7/2/2004	7/30/2004	7/2/2004
Constituent	Units	Most Stringent GW Screening Level [3]	Screening Level for Groundwater - Protective of Surface Water	Screening Level for Groundwater - Protective of Sediment					Filtered		Filtered
Ethylbenzene	µg/L	3.10E+01	3.10E+01	na				1 U		1 UJ	
Hexachlorobutadiene	µg/L	1.00E-02	1.00E-02	1.08E-02				2 U	2 U	5 UJ	2 U
Iodomethane	µg/L	na	na	na				1 U		1 UJ	
Isopropylbenzene	µg/L	8.00E+02	na	na				1 U		1 UJ	
Methyl ethyl ketone	µg/L	4.80E+03	na	na				5 U		5 UJ	
Methyl isobutyl ketone	µg/L	6.40E+02	na	na				5 U		5 UJ	
Naphthalene	µg/L	1.40E+00	1.40E+00	9.05E+01				1 U	1 U	5 UJ	1 U
n-Butylbenzene	µg/L	4.00E+02	na	na				1 U		1 UJ	
n-Propylbenzene	µg/L	8.00E+02	na	na				1 U		1 UJ	
p-Cymene	µg/L	na	na	na				1 U		1 UJ	
sec-Butylbenzene	µg/L	8.00E+02	na	na				1 U		1 UJ	
Styrene	µg/L	1.00E+02	na	na				1 U		1 UJ	
tert-Butylbenzene	µg/L	8.00E+02	na	na				1 U		1 UJ	
Tetrachloroethene	µg/L	2.90E+00	2.90E+00	na				1 U		1 UJ	
Toluene	µg/L	1.30E+02	1.30E+02	na				1 U		1 UJ	
trans-1,2-Dichloroethene	µg/L	3.10E+00	3.10E+00	na				1 U		1 UJ	
trans-1,3-Dichloropropene	µg/L	4.38E-01	2.00E+00	na				1 U		1 UJ	
trans-1,4-Dichloro-2-butene	µg/L	na	na	na				5 U		5 UJ	
Trichloroethene	µg/L	7.00E-01	7.00E-01	na				1 U		1 UJ	
Trichlorofluoromethane	µg/L	1.20E+02	na	na				1 U		1 UJ	
Vinyl acetate	µg/L	7.81E+03	na	na				5 U		5 UJ	
Vinyl chloride	µg/L	1.80E-01	1.80E-01	na				1 U		1 UJ	
Xylene (m- & p-)	µg/L	3.03E+02	na	na				1 U		1 UJ	
Xylene (o-)	µg/L	4.32E+02	na	na				1 U		1 UJ	
Total Xylenes (calc'd)	µg/L	3.32E+02	na	na				1 U		1 UJ	
Organochlorine Pesticides (µg/L)											
1,2-Dibromo-3-chloropropane	µg/L	2.00E-01	na	na				5 U		5 UJ	
1,2-Dibromoethane (EDB)	µg/L	5.00E-02	na	na				1 U		1 UJ	
4,4'-DDD	µg/L	7.90E-06	7.90E-06	4.08E+00				0.002 U	0.0049 U		0.0017 U
4,4'-DDE	µg/L	8.80E-07	8.80E-07	1.53E+00				0.038 U	0.058 U		0.0017 U
4,4'-DDT	µg/L	1.20E-06	1.20E-06	7.76E-06				0.002 U	0.0017 U		0.0017 U
Aldrin	µg/L	4.10E-08	4.10E-08	1.08E-04				0.001 U	0.0008 U		0.0008 U
alpha-BHC	µg/L	4.80E-05	4.80E-05	3.98E+00				0.001 U	0.0008 U		0.0008 U
alpha-Chlordane	µg/L	1.03E-04	3.64E-04	1.03E-04				0.001 U	0.038 U		0.0008 U
alpha-Endosulfan	µg/L	8.70E-03	8.70E-03	2.58E+04				0.001 U	0.0008 U		0.0008 U
beta-BHC	µg/L	1.40E-03	1.40E-03	1.15E+01				0.001 U	0.0008 U		0.0008 U
beta-Endosulfan	µg/L	8.70E-03	8.70E-03	2.58E+04				0.002 U	0.0017 U		0.0017 U
DDTs (total-calc'd)	µg/L	1.00E-03	1.00E-03	TBD				0.038 U	0.058 U		0.0017 U
delta-BHC	µg/L	na	na	na				0.001 U	0.0083 U		0.012 U
Dieldrin	µg/L	1.20E-06	1.20E-06	2.06E-04				0.027 U	0.0017 U		0.0017 U

PUBLIC REVIEW DRAFT
Table AA-1
Seep Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

		Location ID			SW-01 [1]	SW-02 [1]	SW-03 [1]	SP-61 [2]	SP-61 [2]	SP-62 [2]	SP-62 [2]
		Sample Date			5/15/1995	5/15/1995	5/15/1995	7/2/2004	7/2/2004	7/30/2004	7/2/2004
Constituent	Units	Most Stringent GW Screening Level [3]	Screening Level for Groundwater - Protective of Surface Water	Screening Level for Groundwater - Protective of Sediment					Filtered		Filtered
Endosulfan sulfate	µg/L	1.00E+01	1.00E+01	na				0.002 U	0.0017 U		0.0017 U
Endrin	µg/L	2.00E-03	2.00E-03	2.46E+02				0.002 U	0.0017 U		0.0017 U
Endrin aldehyde	µg/L	3.50E-02	3.50E-02	na				0.002 UJ	0.0017 UJ		0.0017 UJ
Endrin ketone	µg/L	na	na	na				0.002 U	0.0017 U		0.0017 U
gamma-BHC	µg/L	1.26E-01	1.26E-01	2.96E+01				0.001 U	0.0008 U		0.0008 U
gamma-Chlordane	µg/L	1.03E-04	3.64E-04	1.03E-04				0.001 U	0.0008 U		0.0017 U
Heptachlor	µg/L	3.40E-07	3.40E-07	5.50E-04				0.001 U	0.0008 U		0.0008 U
Heptachlor epoxide	µg/L	2.40E-06	2.40E-06	TBD				0.001 U	0.0008 U		0.0008 U
Hexachlorobenzene	µg/L	5.00E-06	5.00E-06	1.45E-02				1 U	1 U		1 U
Hexachlorocyclopentadiene	µg/L	1.00E+00	1.00E+00	2.67E+02				5 U	5 U		5 U
Methoxychlor	µg/L	2.00E-02	2.00E-02	5.56E+02				0.01 U	0.0083 U		0.0083 U
Total aldrin/dieldrin (calc'd)	µg/L							0.027 U	0.0017 U		0.0017 U
Total Chlordane (calc'd)	µg/L							0.001 U	0.038 U		0.0017 U
Toxaphene	µg/L	3.20E-05	3.20E-05	4.26E-01				0.1 U	0.083 U		0.083 U
Conventionals (mg/L)											
Total Organic Carbon	mg/L							**2.57**			
Dissolved Organic Carbon	mg/L								1.5 UJ		1.5 UJ
Total suspended solids	mg/L							**15.8**			

Notes:

1. Hart Crowser, Inc. 1995. Request for Initial Review of Proposed RI/FS for Independent Cleanup Reichhold/Lone Star Site, letter dated August 3, 1995, to Washington Department of Ecology.

2. Windward Environmental LLC (Windward). Data Report: Survey and Sampling of Lower Duwamish Waterway Seeps – Final, Lower Duwamish Waterway Group. 18 November 2004.

3. Groundwater screening levels (most stringent pCUL, potable water)

***Bold** text indicates that compound was detected.*

Key:
0.5DL = calculation based on 1/2 of the method detection limit
calc'd = calculated
HPAH = heavy polycyclic aromatic hydrocarbon
LPAH = light polycyclic aromatic hydrocarbons
mg/L = milligrams per liter
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
SVOC = semi-volatile organic compounds
TPH = total petroleum hydrocarbons
µg/L = micrograms per liter
VOC = volatile organic compounds

Data Qualifiers:
BU = The analyte is a non-detect but was detected in the associated method blank.
J = The detected results are qualified as estimated in accordance with National Functional Guidelines (NFGs).
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and other parameters are reported to the Reporting Limit (RL). Result reported as the MDL or RL and is qualified as non detected.
UJ = Non-detected compound qualified as estimated.

APPENDIX BB ANALYTICAL SUMMARY TABLES FOR STORMWATER DATA

PUBLIC REVIEW DRAFT

Table BB-1

Stormwater Analytical Results Summary - Metals

2012 and 2013 Stormwater Sampling Events

5900 West Marginal Way Site

Seattle, Washington

Location	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01
Date	10/30/2012	10/30/2012	12/14/2012	12/14/2012	1/9/2013	1/9/2013	4/8/2013	4/8/2013
Sample ID	STW-01-103012	DUP103012-1	STW-01-121412	DUP121412-1	STW-01-010913	DUP-010913	STW-01-040813	DUP-040813
Sample Type	N	FD	N	FD	N	FD	N	FD
Analyte								
Metals (µg/L)								
Total Antimony	**0.6**	**0.6**	**0.5**	**0.5**	**0.4**	**0.4**	**0.7**	**0.8**
Dissolved Antimony	**0.5**	**0.5**	**0.5**	**0.5**	**0.4**	**0.4**	**0.7**	**0.8**
Total Arsenic	**2.9**	**3.0**	**5.4**	**5.3**	**3.5**	**3.4**	**2.3**	**2.5**
Dissolved Arsenic	**2.3**	**2.3**	**3.7**	**3.8**	**2.2**	**2.2**	**2.2**	**2.2**
Total Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Total Cadmium	0.1 U	0.1 U	**0.1**	**0.1**	0.1 U	0.1 U	0.1 U	0.1 U
Dissolved Cadmium	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total Chromium	**1.6**	**1.7**	**1.3**	**1.3**	**1.6**	**1.6**	**0.5**	0.5 U
Dissolved Chromium	**1.0**	**1.0**	**0.6**	**0.6**	0.5 U	0.5 U	0.5 U	0.5 U
Total Copper	**18.7**	**20.6**	**24.4**	**24.2**	**28.8**	**28.8**	**10.0**	**10.4**
Dissolved Copper	**7.2**	**7.6**	**4.9**	**5.4**	**4.2**	**4.0**	**7.7**	**7.8**
Total Lead	**1.4**	**1.6**	**1.2**	**1.2**	**1.5**	**1.5**	**0.3**	**0.3**
Dissolved Lead	0.1 U	**0.1**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dissolved Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total Nickel	**1.7**	**1.8**	**2.6**	**2.5**	**2.7**	**2.6**	**0.8**	**0.9**
Dissolved Nickel	**0.8**	**0.8**	**1.0**	**1.1**	0.5 U	0.5 U	**0.6**	**0.6**
Total Selenium	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dissolved Selenium	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Total Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Silver	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Total Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dissolved Thallium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Total Zinc	**20**	**22**	**32**	**36**	**39**	**46**	**12**	**13**
Dissolved Zinc	**6**	**8**	**15**	**17**	**11**	**12**	**10**	**10**

Notes:
Results presented in micrograms per liter.
***Bold** text indicates that compound was detected.*

Key:
DUP = field duplicate sample
FD = field duplicate sample
N = normal field sample
STW = stormwater sample
µg/L = micrograms per liter

Laboratory Qualifiers:
U = Result is ≤ the detection limit. Metals are reported to the Reporting Limit (RL). Result reported as the RL and is qualified as non-detected.
If qualified as non-detect due to a detection in associated blank samples, than RL has been revised.

PUBLIC REVIEW DRAFT
Table BB-2
Stormwater Analytical Results Summary - Volatile Organic Compounds and Total Petroleum Hydrocarbons
2012 and 2013 Stormwater Sampling Events
5900 West Marginal Way Site
Seattle, Washington

Location	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01
Date	10/30/2012	10/30/2012	12/14/2012	12/14/2012	1/9/2013	1/9/2013	4/8/2013	4/8/2013
Sample ID	STW-01-103012	DUP103012-1	STW-01-121412	DUP121412-1	STW-01-010913	DUP-010913	STW-01-040813	DUP-040813
Sample Type	N	FD	N	FD	N	FD	N	FD
Analyte								
VOCs (µg/L)								
1,1,1,2-Tetrachloroethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,1,1-Trichloroethane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,1,2,2-Tetrachloroethane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
1,1,2-Trichloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,2,3-Trichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.12 U	0.11 U	0.11 U	0.11 U
1,2,3-Trichloropropane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2,4-Trichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	**0.11** j	0.11 U	0.11 U	0.11 U
1,2,4-Trimethylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,2-Dibromo-3-chloropropane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichlorobenzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichloroethane	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
1,2-Dichloropropane	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,3,5-Trimethylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,3-Dichlorobenzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,3-Dichloropropane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
1,4-Dichlorobenzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
2,2-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U
2-Chloroethyl vinyl ether	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
2-Hexanone	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U	0.90 U
2-Phenylbutane	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
4-Chlorotoluene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
4-Methyl-2-pentanone	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U	0.97 U
Acetone	2.1 U	2.1 U	2.1 U	2.1 U	**6.5** J	**7.8** J	2.1 U	2.1 U
Acrolein	2.5 U	2.5 U	2.5 UJ	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
Acrylonitrile	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U	0.60 U
Benzene	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Bromodichloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Carbon disulfide	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Carbon tetrachloride	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Chlorobenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Chlorobromomethane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Chloroethane	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Chloroform	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
cis-1,2-Dichloroethene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
cis-1,3-Dichloropropene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Cumene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Cymene	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Dibromochloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Ethyl bromide	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Ethylbenzene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Ethylene dibromide	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Freon 11	0.04 U	0.04 U	0.04 UJ	0.04 UJ	0.04 U	0.04 U	0.04 U	0.04 U
Freon 113	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Hexachlorobutadiene	0.07 U	0.07 U	0.07 U	0.07 U	**0.11** j	0.07 U	0.07 U	0.07 U
m,p Xylenes	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methyl bromide	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Methyl chloride	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Methyl iodide	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Methyl tert-butyl ether	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Methylene chloride	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Naphthalene	0.12 U	0.12 U	0.12 U	0.12 U	0.16 U	0.12 U	0.12 U	0.12 U
n-Butylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
n-Propylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
o-Chlorotoluene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

PUBLIC REVIEW DRAFT
Table BB-2
Stormwater Analytical Results Summary - Volatile Organic Compounds and Total Petroleum Hydrocarbons
2012 and 2013 Stormwater Sampling Events
5900 West Marginal Way Site
Seattle, Washington

Location	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01
Date	10/30/2012	10/30/2012	12/14/2012	12/14/2012	1/9/2013	1/9/2013	4/8/2013	4/8/2013
Sample ID	STW-01-103012	DUP103012-1	STW-01-121412	DUP121412-1	STW-01-010913	DUP-010913	STW-01-040813	DUP-040813
Sample Type	N	FD	N	FD	N	FD	N	FD
Analyte								
o-Xylene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Styrene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
tert-Butylbenzene	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Tetrachloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Toluene	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
trans-1,2-Dichloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
trans-1,4-Dichlorobutene	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Trichloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Vinyl acetate	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
Vinyl chloride	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
TPH								
Gasoline Range Organics	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U
Diesel Range Organics	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.02 U	0.02 U
Motor Oil Range Organics	**0.11** j	**0.11** j	0.01 U	0.01 U	0.01 U	0.01 U	0.04 U	0.04 U

Notes:
Results presented in micrograms per liter.
Bold *text indicates that compound was detected.*

Key:
DUP = field duplicate sample
FD = field duplicate sample
N = normal field sample
STW = stormwater sample
µg/L = micrograms per liter
VOC = volatile organic compound

Laboratory Qualifiers:
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Result reported as the MDL or RL and is qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, than RL has been revised.
UJ = The non detected results are qualified as estimated in accordance with USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

PUBLIC REVIEW DRAFT

Table BB-3

Stormwater Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons

2012 and 2013 Stormwater Sampling Events

5900 West Marginal Way Site

Seattle, Washington

Location	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01
Date	10/30/2012	10/30/2012	12/14/2012	12/14/2012	1/9/2013	1/9/2013	4/8/2013	4/8/2013
Sample ID	STW-01-103012	DUP103012-1	STW-01-121412	DUP121412-1	STW-01-010913	DUP-010913	STW-01-040813	DUP-040813
Sample Type	N	FD	N	FD	N	FD	N	FD
Analyte								
SVOCs (µg/L)								
Pentachlorophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 UJ	2.4 UJ	2.4 U	2.4 U
2,4,5-Trichlorophenol	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
2,4,6-Trichlorophenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
2,4-Dichlorophenol	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
2-Chlorophenol	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Phenol	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
Hexachlorobenzene	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
1,2,4-Trichlorobenzene	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2-Dichlorobenzene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,3-Dichlorobenzene	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
1,4-Dichlorobenzene	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U
2,2-Oxybis(1-chloropropane)	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
2,4-Dimethylphenol	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
2,4-Dinitrophenol	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
2,4-Dinitrotoluene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2,6-Dinitrotoluene	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
2-Chloronaphthalene	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
2-Nitroaniline	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
2-Nitrophenol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
3-Nitroaniline	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
4-Bromophenyl phenyl ether	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U	0.42 U
4-Chloro-3-methylphenol	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
4-Chlorophenyl phenyl ether	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U	0.45 U
4-Nitrophenol	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
Benzoic acid	5.1 UJ	5.1 UJ	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U	5.1 U
Benzyl alcohol	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl butyl phthalate	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
Bis(2-chloroethoxy)methane	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
Bis(2-ethylhexyl)phthalate	1.9 U	1.9 U	**1.8** j	**2.2** j	**0.5** j	1.0 U	1.0 U	1.0 U
Carbazole	0.31 U	0.31 U	0.31 UJ	0.31 UJ	0.31 U	0.31 U	0.31 U	0.31 U
Dibutyl Phthalate	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
Dichloroethyl ether	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Diethyl Phthalate	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
Dimethylphthalate	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
Dinitro-o-cresol	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U	3.1 U
Di-n-octyl phthalate	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U
Hexachlorobutadiene	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Hexachlorocyclopentadiene	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Hexachloroethane	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Isophorone	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
Nitrobenzene	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
n-Nitrosodi-n-propylamine	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
n-Nitrosodiphenylamine	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U	0.46 U
o-Cresol	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
p-Chloroaniline	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U
p-Cresol	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
p-Nitroaniline	2.2 U	2.2 U	2.2 UJ	2.2 UJ	2.2 U	2.2 U	2.2 U	2.2 U
PAHs (mg/L)								
1-Methylnaphthalene	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
2-Methylnaphthalene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthene	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U
Acenaphthylene	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U	0.024 U
Anthracene	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Benzo(a)anthracene	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Benzo(a)pyrene	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
Benzo(g,h,i)perylene	0.030 UJ	0.030 UJ	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U
Chrysene	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U
Dibenzo(a,h)anthracene	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U	0.042 U
Dibenzofuran	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Fluoranthene	0.021 U	0.021 U	0.021 U	0.021 U	0.021 U	0.021 U	0.021 U	0.021 U
Fluorene	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U
Indeno(1,2,3-cd)pyrene	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U	0.029 U
Naphthalene	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Phenanthrene	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U	0.026 U
Pyrene	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U
Total (B+J+K) Benzofluoranthenes	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U

PUBLIC REVIEW DRAFT

Table BB-3

Stormwater Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
2012 and 2013 Stormwater Sampling Events
5900 West Marginal Way Site
Seattle, Washington

Notes:
Results presented in micrograms per liter.
Bold *text indicates that compound was detected.*

Key:
DUP = field duplicate sample
FD = field duplicate sample
N = normal field sample
PAH = polycyclic aromatic hydrocarbon
STW = stormwater sample
SVOC = semi-volatile organic compound
µg/L = micrograms per liter

Laboratory Qualifiers:
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Result reported as the MDL or RL and is qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, than RL has been revised.
UJ = The non detected results are qualified as estimated in accordance with USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

PUBLIC REVIEW DRAFT

Table BB-4

Stormwater Analytical Results Summary - Polychlorinated Biphenyls

2012 and 2013 Stormwater Sampling Events

5900 West Marginal Way Site

Seattle, Washington

Location	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01
Date	10/30/2012	10/30/2012	12/14/2012	12/14/2012	1/9/2013	1/9/2013	4/8/2013	4/8/2013
Sample ID	STW-01-103012	DUP103012-1	STW-01-121412	DUP121412-1	STW-01-010913	DUP-010913	STW-01-040813	DUP-040813
Sample Type	N	FD	N	FD	N	FD	N	FD
Analyte								
PCBs (µg/L)								
Aroclor 1016	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U	0.0025 U
Aroclor 1221	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Aroclor 1232	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Aroclor 1242	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Aroclor 1248	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Aroclor 1254	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U
Aroclor 1260	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U	0.0028 U

Notes:
Results presented in micrograms per liter.
Bold *text indicates that compound was detected.*

Key:
DUP = field duplicate sample
FD = field duplicate sample
N = normal field sample
PCB = polychlorinated biphenyl
STW = stormwater sample
µg/L = micrograms per liter

Laboratory Qualifiers:
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL). Result reported as the MDL and is qualified as non-detected.

PUBLIC REVIEW DRAFT
Table BB-5
Stormwater Analytical Results Summary - Dioxins/Furans
2012 and 2013 Stormwater Sampling Events
5900 West Marginal Way Site
Seattle, Washington

Analyte	Location	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01	STW-01
	Date	10/30/2012	10/30/2012	12/14/2012	12/14/2012	1/9/2013	1/9/2013	4/8/2013	4/8/2013
	Sample ID	STW-01-103012	DUP103012-1	STW-01-121412	DUP121412-1	STW-01-010913	DUP-010913	STW-01-040813	DUP-040813
	Sample Type	N	FD	N	FD	N	FD	N	FD
	TEF								
Dioxins/Furans (pg/L)									
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1	0.613 U	0.650 U	0.573 U	0.693 U	1.05 U	0.529 U	0.550 U	0.713 U
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	--	**0.854**	0.535 U	**0.799**	0.537 U	0.528 U	0.529 U	0.550 U	0.514 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	1	**0.887** j	**0.706** j	0.567 U	0.537 U	0.528 U	**0.670** j	0.593 U	0.514 U
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	--	**2.06**	**1.61**	0.541 U	**0.750**	0.528 U	**2.83**	**1.61**	**2.27**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.1	**1.88** j	**1.28** j	**1.03** j	**1.54** j	**0.897** j	**1.60** j	1.31 U	1.08 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.1	**5.48** j	**4.33** j	**4.13** j	3.37 U	1.46 U	7.14 U	**4.26** j	**4.75** j
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.1	**4.67** j	**3.06** j	**3.80** j	4.26 U	**1.42** j	**3.47** j	**4.39** j	**3.91** j
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	--	**27.0**	**23.0**	**23.5**	**16.9**	**2.32**	**24.3**	**25.6**	**21.0**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.01	**149**	**115**	**99.0**	**95.7**	**37.9** j	**215**	**144**	**144**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	--	**273**	**210**	**187**	**190**	**64.8**	**381**	**268**	**258**
Octachlorodibenzo-P-Dioxin (OCDD)	0.0003	**4310**	**2910**	**2850**	**2920**	**726** J	**5150** J	**3160** J	**3730** J
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.1	0.541 U	0.535 U	0.732 U	0.537 U	0.528 U	0.529 U	0.550 U	0.514 U
Tetrachlorodibenzofuran homologs (Total TCDF)	--	**1.53**	**1.24**	**0.546**	**0.540**	0.763 U	0.554 U	0.550 U	0.514 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.03	0.541 U	**1.07** j	0.541 U	0.537 U	0.528 U	0.529 U	0.694 U	**0.900** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.3	**1.98** j	**1.51** j	1.26 U	**1.11** j	0.745 U	**2.05** j	**1.33** j	**1.82** j
Pentachlorodibenzofuran homologs (Total PeCDF)	--	**20.6**	**17.0**	0.541 U	**4.05**	0.528 U	**8.67**	**7.45**	**17.2**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.1	**14.5** j	**11.4** j	**5.84** j	**5.32** j	**3.42** j	**12.9** j	**7.81** j	**10.5** j
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.1	**2.64** j	**2.29** j	**1.89** j	1.72 U	0.761 U	**2.58** j	**2.05** j	2.59 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.1	0.541 U	0.535 U	0.541 U	0.537 U	0.601 U	0.529 U	0.573 U	0.514 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.1	**1.28** j	**0.903** j	**0.816** j	0.649 U	0.875 U	**1.25** j	**1.46** j	**2.37** j
Hexachlorodibenzofuran homologs (Total HxCDF)	--	**86.3**	**65.0**	**38.4**	**35.2**	**4.08**	**78.3**	**56.9**	**73.5**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	0.01	**47.7** j	**36.5** j	**20.8** j	**21.9** j	**9.76** j	**40.2** j	**30.2** j	**39.8** j
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.01	**7.87** j	**5.80** j	**3.43** j	2.94 U	1.79 U	**7.23** j	**5.17** j	**5.99** j
Heptachlorodibenzofuran homologs (Total HpCDF)	--	**166**	**131**	**65.5**	**63.2**	**30.1**	**145**	**98.4**	**135**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.0003	**126**	**96.8** j	**48.0** j	**45.2** j	**25.3** j	**114**	**98.3** j	**127**
Calculated TEQ (ND=1/2 DL)	--	**8.27**	**6.37**	**4.68**	**4.28**	**2.4**	**8.35**	**5.87**	**6.63**

Notes:
Results presented in picograms per liter.
-- = No value available
ND = Non-detect values calculation method
1/2 DL = Non-detect values calculated as one-half the detection limit
Bold *text indicates that compound was detected.*
TEQ = Toxicity Equivalency Quotient to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD). Only positively identified compounds are included in TEQ calculation.

Key:
DUP = field duplicate sample
FD = field duplicate sample
N = normal field sample
NFG = National Functional Guidelines
pg/L = picograms per liter
STW = stormwater sample
TEF = Toxicity Equivalency Factor

PUBLIC REVIEW DRAFT
Table BB-5
Stormwater Analytical Results Summary - Dioxins/Furans
2012 and 2013 Stormwater Sampling Events
5900 West Marginal Way Site
Seattle, Washington

Laboratory Qualifiers:
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Result reported as the MDL or RL and is qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then RL has been revised.
J = The detected results are qualified as estimated in accordance with NFGs.

PUBLIC REVIEW DRAFT

Table BB-6

Stormwater Analytical Results Summary - Field Parameters

2012 and 2013 Stormwater Sampling Events

5900 West Marginal Way Site

Seattle, Washington

Analyte	Location	STW-01	STW-01	STW-01	STW-01	STW-01
	Date	10/30/2012	12/14/2012	1/9/2013	4/8/2013	4/8/2013
	Sample ID	STW-01-103012	STW-01-121412 [1]	STW-01-010913	STW-01-040813	DUP-040813
	Unit					
Dissolved Oxygen	mg/L	**7.26**	**5.33**	**8.2**	**2.53**	**2.53**
Electrical Conductivity (Field Measured)	µS/cm	**109**	**179**	**93**	**140**	**140**
Oxidation-Reduction Potential	mV	**232**	**166**	**204**	**108**	**108**
pH	pH units	**7.51**	**6.99**	**7.79**	**6.88**	
pH (Field Measured)	pH units	**6.66**	**6.27**	**7.76**	**7.05**	**7.05**
Salinity (Field Measured)	‰		**0.1**	**0**	**0.1**	**0.1**
Temperature	deg C	**13.24**	**5.41**	**8.07**	**10.36**	**10.36**
Total Suspended Solids	mg/L				**1.5**	**1.6**
Turbidity	NTU	**42**	**44.4**	**79.4**	**7.31**	**7.31**
Glacier Measured Turbidity	NTU	**12**	**32**	**30**	**5.3**	**5.3**

Notes:

1. Sample STW-01-121412 field parameter measurements are averages, n=4.

Empty cells = Not analyzed.

***Bold** text indicates that compound was detected.*

Key:

‰ = parts per mille (thousand)

deg C = degrees Celsius

DUP = field duplicate sample

mg/L = milligrams per liter

mV = millivolts

pH units = pH units

NTU = nephelometric turbidity units

STW = stormwater sample

µS/cm = microsiemens per centimeter

Washington State Department of Ecology

Discharge Monitoring Report (DMR)

Received Date: 1/24/2013

Permit Number: WAG503378 **Permittee:** GLACIER NW W MARGINAL READY MIX

Facility County: King **Receiving Waterbody:**

Monitoring Period: 10/01/2012 - 12/31/2012 **Outfall:** G001 **Version:** 1

Week	Monitoring Point	Oil & Grease Yes/No Once per defined event Visual Observation	pH Standard Units Monthly Grab
		G001	G001
3-M	**10/15/12**		7.9
8-F	**11/23/12**		7.2
13-W	**12/26/12**		8.2

Discharge Monitoring Report (DMR)

Received Date: 1/24/2013

Permit Number: WAG503378 **Permittee:** GLACIER NW W MARGINAL READY MIX

Facility County: King **Receiving Waterbody:**

Monitoring Period: 10/01/2012 - 12/31/2012 **Outfall:** S001 **Version:** 1

Week	Monitoring Point	Oil & Grease Yes/No Once per defined event Visual Observation	pH Standard Units Monthly Grab	Turbidity (NTU) Measured NTU 2/Month Grab
		S001	S001	S001
5-T	**10/30/12**		7.4	12
5-W	**10/31/12**			17
5-F	**11/2/12**		7.2	15
8-M	**11/19/12**			28
10-M	**12/3/12**		7.1	6
10-W	**12/5/12**			7
11-F	**12/14/12**		7	32
Month 1 Average				14.5
				<= 50
Month 2 Average				21.5
				<= 50
Month 3 Average				15
				<= 50

Printed Date: 2/19/2013 1:09:46 PM

Washington State Department of Ecology

Discharge Monitoring Report (DMR)

Received Date: 4/25/2013

Permit Number: WAG503378 **Permittee:** GLACIER NW W MARGINAL READY MIX

Facility County: King **Receiving Waterbody:**

Monitoring Period: 01/01/2013 - 03/31/2013 **Outfall:** G001 **Version:** 1

Week	Monitoring Point	Oil & Grease Yes/No Once per defined event Visual Observation	pH Standard Units Monthly Grab
		G001	G001
4-W	**1/23/13**		8
8-Th	**2/21/13**		8
11-T	**3/12/13**		8

Reporting Codes Used: C - No Discharge

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Received Date: 4/25/2013

Permit Number: WAG503378 **Permittee:** GLACIER NW W MARGINAL READY MIX

Facility County: King **Receiving Waterbody:**

Monitoring Period: 01/01/2013 - 03/31/2013 **Outfall:** S001 **Version:** 1

Week	Monitoring Point	Oil & Grease Yes/No Once per defined event Visual Observation	pH Standard Units Monthly Grab	Turbidity (NTU) Measured NTU 2/Month Grab
		S001	S001	S001
2-W	**1/9/13**		8	30
2-F	**1/11/13**			6.4
5-F	**2/1/13**		C	C
10-Th	**3/7/13**		7.9	2.1
12-W	**3/20/13**			2.6
Month 1 Average				18.2
				<= 50
Month 2 Average				C
				<= 50
Month 3 Average				2.4
				<= 50

Reporting Codes Used: C - No Discharge

Printed Date: 5/2/2013 1:47:24 PM

Washington State Department of Ecology

Discharge Monitoring Report (DMR)

Received Date: 7/24/2013

Permit Number: WAG503378 **Permittee:** GLACIER NW W MARGINAL READY MIX

Facility County: King **Receiving Waterbody:**

Monitoring Period: 04/01/2013 - 06/30/2013 **Outfall:** G001 **Version:** 1

Week	Monitoring Point	Oil & Grease Yes/No Once per defined event Visual Observation	pH Standard Units Monthly Grab
		G001	G001
3-Th	**4/18/13**		7.9
7-M	**5/13/13**		7.6
13-T	**6/25/13**		7.8

Reporting Codes Used: C - No Discharge

Received Date: 7/24/2013

Permit Number: WAG503378 **Permittee:** GLACIER NW W MARGINAL READY MIX

Facility County: King **Receiving Waterbody:**

Monitoring Period: 04/01/2013 - 06/30/2013 **Outfall:** S001 **Version:** 1

Week	Monitoring Point	Oil & Grease Yes/No Once per defined event Visual Observation	pH Standard Units Monthly Grab	Turbidity (NTU) Measured NTU 2/Month Grab
		S001	S001	S001
2-M	**4/8/13**		7.1	5.3
2-T	**4/9/13**			1.5
Month 1 Average				5.3
				<= 50
Month 2 Average				C
				<= 50
Month 3 Average				C
				<= 50

Reporting Codes Used: C - No Discharge

Printed Date: 8/22/2013 5:02:52 PM

APPENDIX CC ANALYTICAL SUMMARY TABLES FOR STORMWATER CONVEYANCE SYSTEM SOLIDS DATA

PUBLIC REVIEW DRAFT

Table CC-1

Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Metals

5900 West Marginal Way Site

Seattle, Washington

Constituent	Method	Units	Location	Catch Basin		Stormwater Swale Solids				Tank Solids			
				CB-01		SWD-01		SWD-02		TANK-01		TANK-01	
			Date	9/4/2012		9/4/2012		9/4/2012		9/4/2012		9/4/2012	
			Sample ID	CB-01		SWD-01		SWD-02		TANK-01		DUP090412	
			Screening Level										
Metals													
Arsenic	EPA 200.8	mg/kg dw	7	**23.6**		**19.9**		**2.6**		**13.1**		**12.5**	
Chromium	SW6010C	mg/kg dw	260	**62**		**34**		**18.7**		**33**		**33**	
Copper	SW6010C	mg/kg dw	390	**236**		**338**		**40.1**		**181**		**180**	
Antimony	EPA 200.8	mg/kg dw	87.7	**1.2**		0.3	U	0.2	U	0.2	U	0.2	U
Beryllium	EPA 200.8	mg/kg dw	438	0.9	U	**0.4**		**0.2**		**0.6**		**0.6**	
Cadmium	EPA 200.8	mg/kg dw	5.1	**2.9**		**1.6**		**0.2**		**28.9**		**29.7**	
Lead	EPA 200.8	mg/kg dw	450	**225**		**47.0**		**5.7**		**39.0**		**37.4**	
Mercury	SW7471	mg/kg dw	0.41	**0.15**		**0.21**		**0.02**	J-	**0.04**		**0.04**	
Nickel	EPA 200.8	mg/kg dw	4380	**42**		**42.4**		**27.5**		**33.3**		**34.4**	
Silver	SW6010C	mg/kg dw	6.1	1	U	1	U	0.3	U	1	U	2	U
Thallium	EPA 200.8	mg/kg dw	2.19	0.9	U	0.3	U	0.2	U	0.2	U	0.2	U
Zinc	SW6010C	mg/kg dw	410	**955**		**552**		**62**		**590**		**568**	

Notes:

Bold *text indicates that compound was detected.*

Screening Level = Lower Duwamish Waterway Preliminary Cleanup Level Workbook Target Sediment Concentration (Ecology 2019).

Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.

NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:

CB = catch basin

DUP = field duplicate sample

dw = dry weight

mg/kg = milligrams per kilogram, equivalent to parts per million

SWD = stormwater ditch

TANK = tank solids

Laboratory Data Qualifiers:

U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

J- = The detected results are qualified as estimated in accordance with NFGs, biased low.

PUBLIC REVIEW DRAFT
Table CC-2
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Semivolatile Organics & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Catch Basin		Stormwater Swale Solids				Tank Solids			
					CB-01		SWD-01		SWD-02		TANK-01		TANK-01	
				Date	9/4/2012		9/4/2012		9/4/2012		9/4/2012		9/4/2012	
				Sample ID	CB-01		SWD-01		SWD-02		TANK-01		DUP090412	
				Screening Level										
Total organic carbon	SW9060M	%	--	--	24.4		21.5		3.46	J-	1.73		1.39	
Total organic carbon	SW9060M	kg/kg	--	--	0.244		0.215		0.0346	J-	0.0173		0.0139	
PAHs														
Acenaphthene	SW8270D	mg/kg dw	--	0.5	0.044	U	0.0093	U	0.0031	U	0.003	U	0.003	U
Acenaphthylene	SW8270D	mg/kg dw	--	1.3	0.077	U	0.016	U	0.0053	U	0.0052	U	0.0052	U
Anthracene	SW8270D	mg/kg dw	--	0.96	0.061	U	0.013	U	0.0042	U	0.0041	U	0.0041	U
Fluorene	SW8270D	mg/kg dw	--	0.54	0.059	U	0.012	U	0.0041	U	0.004	U	0.004	U
Naphthalene	SW8270D	mg/kg dw	--	2.1	0.037	U	**0.045**	j	0.0026	U	0.0025	U	0.0025	U
Phenanthrene	SW8270D	mg/kg dw	--	1.5	**0.61**		**0.14**		0.0034	U	**0.033**		**0.032**	
Benzo(a)anthracene	SW8270D	mg/kg dw	0.1	1.3	**0.19**	j	**0.05**	j	0.0031	U	0.003	U	0.003	U
Benzo(a)pyrene	SW8270D	mg/kg dw	1	1.6	**0.28**		**0.07**		0.0051	U	**0.01**	j	**0.013**	j
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	--	0.67	**0.27**		**0.10**		**0.011**	j	**0.026**		**0.028**	
Chrysene	SW8270D	mg/kg dw	0.01	1.4	**0.58**		**0.18**		**0.01**	j	**0.026**		**0.028**	
Dibenzo(a,h)anthracene	SW8270D-SIM	mg/kg dw	0.4	0.23	**0.046**	j	**0.03**		0.0019	U	**0.0032**	j	**0.0034**	j
Fluoranthene	SW8270D	mg/kg dw	--	1.7	**0.76**		**0.19**		**0.01**	j	**0.026**		**0.028**	
Indeno(1,2,3-cd)pyrene	SW8270D	mg/kg dw	0.1	0.6	**0.16**	j	**0.07**		0.0044	U	**0.012**	j	**0.012**	j
Pyrene	SW8270D	mg/kg dw	--	2.6	**0.65**		**0.17**		**0.0093**	j	**0.034**		**0.036**	
Total (B+J+K) Benzofluoranthenes	SW8270D	mg/kg dw	0.1	3.2	**0.74**		**0.25**		**0.016**	j	**0.041**		**0.044**	
Total LPAH (ND = 0)	Calculated	mg/kg dw	--	5.2	**1.996**		**0.651**		**0.026**		**0.0922**		**0.1004**	
Total HPAH (ND = 0)	SW8270D	mg/kg dw	--	12	0.041	U	0.0087	U	0.0029	U	0.0028	U	0.0028	U
Carcinogenic PAH TEQ (ND=1/2 DL) [1]	Calculated	mg/kg dw	--	0.09	**0.413**		**0.121**		**0.005**		**0.017**		**0.020**	
PAHs - OC Normalized														
Acenaphthene [2]	SW8270D	mg/kg - OC	--	--	0.18	U	0.0433	U	0.0896	U	0.173	U	0.216	U
Acenaphthylene [2]	SW8270D	mg/kg - OC	--	--	0.316	U	0.0744	U	0.153	U	0.301	U	0.374	U
Anthracene [2]	SW8270D	mg/kg - OC	--	--	0.25	U	0.0605	U	0.121	U	0.237	U	0.295	U
Fluorene [2]	SW8270D	mg/kg - OC	--	--	0.242	U	0.0558	U	0.118	U	0.231	U	0.288	U
Naphthalene [2]	SW8270D	mg/kg - OC	--	--	0.152	U	**0.209**	j	0.0751	U	0.145	U	0.18	U
Phenanthrene [2]	SW8270D	mg/kg - OC	--	--	**2.5**		**0.651**		0.0983	U	**1.91**		**2.3**	
Benzo(a)anthracene [3]	SW8270D	mg/kg - OC	--	--	**0.779**	j	**0.237**	j	0.0896	U	0.173	U	0.216	U
Benzo(a)pyrene [3]	SW8270D	mg/kg - OC	--	--	**1.15**		**0.33**		0.147	U	**0.578**	j	**0.935**	j
Benzo(g,h,i)perylene [3]	SW8270D	mg/kg - OC	--	--	**1.11**		**0.465**		**0.318**	j	**1.5**		**2.01**	
Chrysene [3]	SW8270D	mg/kg - OC	--	--	**2.38**		**0.837**		**0.289**	j	**1.5**		**2.01**	
Dibenzo(a,h)anthracene [3]	SW8270D-SIM	mg/kg - OC	--	--	**0.189**	j	**0.13**		0.0549	U	**0.185**	j	**0.245**	j
Fluoranthene [3]	SW8270D	mg/kg - OC	--	--	**3.11**		**0.884**		**0.289**	j	**1.5**		**2.01**	
Indeno(1,2,3-cd)pyrene [3]	SW8270D	mg/kg - OC	--	--	**0.656**	j	**0.33**		0.127	U	**0.694**	j	**0.863**	j
Pyrene [3]	SW8270D	mg/kg - OC	--	--	**2.66**		**0.791**		**0.269**	j	**1.97**		**2.59**	
Total (B+J+K) Benzofluoranthenes [3]	SW8270D	mg/kg - OC	--	--	**3.03**		**1.16**		**0.462**	j	**2.37**		**3.17**	
2-Methylnaphthalene	SW8270D	mg/kg - OC	--	--	0.168	U	0.0405	U	0.0838	U	0.162	U	0.201	U

PUBLIC REVIEW DRAFT
Table CC-2
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Semivolatile Organics & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Catch Basin		Stormwater Swale Solids				Tank Solids			
					CB-01		SWD-01		SWD-02		TANK-01		TANK-01	
				Date	9/4/2012		9/4/2012		9/4/2012		9/4/2012		9/4/2012	
				Sample ID	CB-01		SWD-01		SWD-02		TANK-01		DUP090412	
				Screening Level										
1-Methylnaphthalene	SW8270D	mg/kg - OC	--	--	**1.9E-05**		**2.2E-05**		**1.8E-05**		**5.9E-05**		**6.4E-05**	
Total LPAH (ND = 0) [3]	Calculated	mg/kg - OC	--	--	**2.5**		**0.86**		**0**		**1.91**		**2.3**	
Total HPAH (ND = 0) [3]	Calculated	mg/kg - OC	--	--	**15.1**		**5.17**		**1.63**		**10.3**		**13.8**	
Sum of Carcinogenic PAHs (ND=0)	Calculated	mg/kg - OC	--	--	**8.18**		**3.03**		**0.751**		**5.33**		**7.22**	
Carcinogenic PAH TEQ (ND=1/2 Detection Limit) [2]	Calculated	mg/kg - OC	--	--	**1.69**		**0.564**		**0.15**		**0.982**		**1.47**	
SVOCs														
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	--	0.031	0.025	U	0.0053	U	0.0017	U	0.0017	U	0.0017	U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	--	0.036	0.015	U	0.0031	U	0.001	U	0.001	U	0.001	U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	--	0.11	0.016	U	0.0034	U	0.0011	U	0.0011	U	0.0011	U
2,4-Dimethylphenol		mg/kg dw	--	0.029	0.039	U	**0.016**	j	0.0027	U	0.0026	U	0.0026	U
Benzoic acid		mg/kg dw	--	0.65	**5.5**	J-	**22**	J-	0.094	U	0.092	UJ	0.092	UJ
Benzyl alcohol	SW8270D-SIM	mg/kg dw	--	0.057	**13**		**53**		0.0066	U	**0.035**		**0.024**	
Dibenzofuran	SW8270D	mg/kg dw	--	0.54	0.055	U	0.012	U	0.0038	U	0.0037	U	**0.01**	j
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	--	0.022	0.017	U	**0.015**		0.0012	U	0.0011	U	0.0011	U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	--	0.011	0.013	U	0.0027	U	0.00089	U	0.00088	U	0.00088	U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	--	0.028	**0.054**	j	0.0039	U	0.0013	U	**0.0026**	j	**0.0026**	j
o-Cresol (2-Methylphenol)	SW8270D-SIM	mg/kg dw	--	0.063	**0.055**	j	0.0051	U	0.0017	U	0.0017	U	0.0017	U
p-Cresol (4-Methylphenol)		mg/kg dw	--	0.67	**1.1**		**0.15**		0.0062	U	0.006	U	0.006	U
Pentachlorophenol	SW8270D-SIM	mg/kg dw	--	0.36	0.19	UJ	**0.31**	J-	0.013	UJ	0.013	UJ	0.013	UJ
Phenol		mg/kg dw	--	0.42	**1.5**		**3.1**		0.0081	U	0.0079	U	**0.013**	j
1,3-Dichlorobenzene		mg/kg dw	--	5					0.0012	U				
SVOCs - OC Normalized														
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg - OC	--	--	0.102	U	0.0247	U	0.0491	U	0.0983	U	0.122	U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg - OC	--	--	0.0615	U	0.0144	U	0.0289	U	0.0578	U	0.0719	U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg - OC	--	--	0.0656	U	0.0158	U	0.0318	U	0.0636	U	0.0791	U
2,4-Dimethylphenol		mg/kg - OC	--	--	0.16	U	**0.0744**	j	0.078	U	0.15	U	0.187	U
Benzoic acid		mg/kg - OC	--	--	**22.5**	J-	**102**	J-	2.72	U	5.32	UJ	6.62	UJ
Benzyl alcohol	SW8270D-SIM	mg/kg - OC	--	--	**53.3**		**247**		0.191	U	**2.02**		**1.73**	
Dibenzofuran	SW8270D	mg/kg - OC	--	--	0.225	U	0.0558	U	0.11	U	0.214	U	**0.719**	j
Hexachlorobenzene	SW8270D-SIM	mg/kg - OC	--	--	0.0697	U	**0.0698**		0.0347	U	0.0636	U	0.0791	U
Hexachlorobutadiene	SW8270D-SIM	mg/kg - OC	--	--	0.0533	U	0.0126	U	0.0257	U	0.0509	U	0.0633	U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg - OC	--	--	**0.221**	j	0.0181	U	0.0376	U	**0.15**	j	**0.187**	j
o-Cresol	SW8270D-SIM	mg/kg - OC	--	--	**0.225**	j	0.0237	U	0.0491	U	0.0983	U	0.122	U
p-Cresol		mg/kg - OC	--	--	**4.51**		**0.698**		0.179	U	0.347	U	0.432	U
Pentachlorophenol	SW8270D-SIM	mg/kg - OC	--	--	0.779	UJ	**1.44**	J-	0.376	UJ	0.751	UJ	0.935	UJ
Phenol		mg/kg - OC	--	--	**6.15**		**14.4**		0.234	U	0.457	U	**0.935**	j
1,3-Dichlorobenzene		mg/kg - OC	--	--					0.0347	U				

PUBLIC REVIEW DRAFT
Table CC-2
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Semivolatile Organics & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Catch Basin	Stormwater Swale Solids		Tank Solids	
					CB-01	SWD-01	SWD-02	TANK-01	TANK-01
				Date	9/4/2012	9/4/2012	9/4/2012	9/4/2012	9/4/2012
				Sample ID	CB-01	SWD-01	SWD-02	TANK-01	DUP090412
				Screening Level					

Notes:
"--" = No value available
ND = 0 = Non-detected values equated to zero to calculate the total value of LPAHs and HPAHs
ND=1/2DL = Non-detect values calculated as one-half the laboratory detection limit
[1] = Toxicity Equivalency Quotient calculations for cPAHs (WAC 173-340-200, WAC-173-340-900, Table 780-2) using benzo(a)pyrene as the reference chemical. If all compounds non-detect, then detection limit equal to maximum detection limit (modified by chemical's toxicity factor).
[2] = LPAH compounds: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, and anthracene.
[3] = HPAH compounds: fluoranthene, pyrene, benz[a]anthracene, chrysene, total benzofluoranthenes, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenzo[a,h]anthracene.
Screening Level = Lower Duwamish Waterway Preliminary Cleanup Level Workbook Target Sediment Concentration (Ecology 2019).
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.
NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
CB = catch basin
DUP = field duplicate sample
HPAH = heavy polycyclic aromatic hydrocarbon
kg/kg = kilogram per kilogram
LPAH = light polycyclic aromatic hydrocarbon
mg/kg dw = milligrams per kilogram dry weight, equivalent to parts per million
mg/kg - OC = milligrams per kilogram organic carbon-normalized, equivalent to parts per million
OC = organic carbon
PAH = polycyclic aromatic hydrocarbon
SVOC = semi-volatile organic compound
SWD = stormwater ditch
TANK = tank solids
TEF = toxicity equivalency factor
TEQ = toxicity equivalency quotient

Laboratory Data Qualifiers:
j = The value reported is less than the reporting limit and should be considered an estimate; qualifier reported by the laboratory.
J- = The detected results are qualified as estimated in accordance with NFGs, biased low.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.
UJ = Non-detected compound qualified as estimated in accordance with NFGs.

PUBLIC REVIEW DRAFT
Table CC-3
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Location	Catch Basin		Stormwater Swale Solids				Tank Solids			
				CB-01		SWD-01		SWD-02		TANK-01		TANK-01	
			Date	9/4/2012		9/4/2012		9/4/2012		9/4/2012		9/4/2012	
			Sample ID	CB-01		SWD-01		SWD-02		TANK-01		DUP090412	
			Screening Level										
Phthalate Esters - Dry Weight													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.063	**1.4**	J+	**0.054**		**0.0085**	J+	**0.021**		**0.023**	
Bis(2-ethylhexyl)phthalate		mg/kg dw	1.3	**32**		**0.48**		0.034	U	**0.29**		**0.28**	
Dibutyl Phthalate		mg/kg dw	1.4	**0.38**		0.023	U	0.0076	U	**0.011**	j	**0.012**	j
Diethyl Phthalate	SW8270D-SIM	mg/kg dw	0.2	**0.097**		0.0092	U	0.003	U	0.027	U	0.027	U
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.05**	j	0.16	U	0.0012	U	**0.0025**	j	0.0012	U
Di-n-octyl phthalate		mg/kg dw	6.2	**0.8**		0.017	U	0.0054	U	0.0053	U	0.0053	U
Phthalate Esters - OC Normalized													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg - OC	--	**5.74**	J+	**0.251**		**0.246**	J+	**1.21**		**1.65**	
Bis(2-ethylhexyl)phthalate		mg/kg - OC	--	**131**		**2.23**		0.983	U	**16.8**		**20.1**	
Dibutyl Phthalate		mg/kg - OC	--	**1.56**		0.107	U	0.22	U	**0.636**	j	**0.863**	j
Diethyl Phthalate	SW8270D-SIM	mg/kg - OC	--	**0.398**		0.0428	U	0.0867	U	1.56	U	1.94	U
Dimethylphthalate	SW8270D-SIM	mg/kg - OC	--	**0.205**	j	0.744	U	0.0347	U	**0.145**	j	0.0863	U
Di-n-octyl phthalate		mg/kg - OC	--	**3.28**		0.0791	U	0.156	U	0.306	U	0.381	U

Notes:
"--" = No value available.
Screening Level = Lower Duwamish Waterway Preliminary Cleanup Level Workbook Target Sediment Concentration (Ecology 2019).
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.
NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
CB = catch basin
DUP = field duplicate sample
mg/kg dw = milligrams per kilogram dry weight, equivalent to parts per million
mg/kg - OC = milligrams per kilogram organic carbon-normalized, equivalent to parts per million
OC = organic carbon
SWD = stormwater ditch
TANK = tank solids

Laboratory Data Qualifiers:
j = The value reported is less than the reporting limit and should be considered an estimate; qualifier reported by the laboratory.
J+ = The detected results are qualified as estimated in accordance with NFGs, biased high.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

PUBLIC REVIEW DRAFT
Table CC-4
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Location	Catch Basin		Stormwater Swale Solids				Tank Solids			
				CB-01		SWD-01		SWD-02		TANK-01		TANK-01	
			Date	9/4/2012		9/4/2012		9/4/2012		9/4/2012		9/4/2012	
			Sample ID	CB-01		SWD-01		SWD-02		TANK-01		DUP090412	
			Screening Level										
PCBs													
Aroclor 1016	SW8082	mg/kg dw	NS	0.0010	U	0.00098	U	0.001	U	0.00098	U	0.00098	U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U
Aroclor 1248	SW8082	mg/kg dw	NS	0.020	U	0.0077	U	0.0078	U	0.0013	U	0.0013	U
Aroclor 1254	SW8082	mg/kg dw	NS	**0.050**		**0.027**		**0.018**		**0.003**	j	**0.0033**	j
Aroclor 1260	SW8082	mg/kg dw	NS	**0.040**		**0.017**		0.0059	U	0.0013	U	**0.0029**	j
Total PCBs (ND = 0) [1]	Calculated	mg/kg dw	0.128	**0.090**		**0.044**		**0.018**		**0.0030**		**0.0062**	
PCBs - OC Normalized													
Aroclor 1016	SW8082	mg/kg - OC	--	0.0041	U	0.00456	U	0.0289	U	0.0566	U	0.0705	U
Aroclor 1221	SW8082	mg/kg - OC	--	0.00533	U	0.00605	U	0.0376	U	0.0751	U	0.0935	U
Aroclor 1232	SW8082	mg/kg - OC	--	0.00533	U	0.00605	U	0.0376	U	0.0751	U	0.0935	U
Aroclor 1242	SW8082	mg/kg - OC	--	0.00533	U	0.00605	U	0.0376	U	0.0751	U	0.0935	U
Aroclor 1248	SW8082	mg/kg - OC	--	0.082	U	0.0358	U	0.225	U	0.0751	U	0.0935	U
Aroclor 1254	SW8082	mg/kg - OC	--	**0.205**		**0.126**		**0.52**		**0.173**	j	**0.237**	j
Aroclor 1260	SW8082	mg/kg - OC	--	**0.164**		**0.0791**		0.171	U	0.0751	U	**0.209**	j
Total PCBs (ND = 0) [1]	Calculated	mg/kg - OC	--	**0.369**		**0.205**		**0.520**		**0.173**		**0.446**	

Notes:
"--" = No value available.
[1] = Total PCBs are calculated such that non-detected PCBs are equal to zero.
Screening Level = Lower Duwamish Waterway Preliminary Cleanup Level Workbook Target Sediment Concentration (Ecology 2019).
***Bold** text indicates that compound was detected.*

NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
CB = catch basin
DUP = field duplicate sample
DW = dry weight
mg/kg dw = milligrams per kilogram dry weight, equivalent to parts per million
mg/kg - OC = milligrams per kilogram organic carbon-normalized, equivalent to parts per million
ND = 0 = Non-detect values equal to 0.0 pg/l
NS = no screening level
OC = organic carbon
PCB = polychlorinated biphenyl
SWD = stormwater ditch
TANK = tank solids

Laboratory Data Qualifiers:
j = The value reported is less than the reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

PUBLIC REVIEW DRAFT
Table CC-5
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEFs	Location	Catch Basin	Stormwater Swale Solids		Tank Solids	
					CB-01	SWD-01	SWD-02	TANK-01	TANK-01
				Date	9/4/2012	9/4/2012	9/4/2012	9/4/2012	9/4/2012
				Sample ID	CB-01	SWD-01	SWD-02	TANK-01	DUP090412
				Screening Level					
Dioxins/Furans									
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**4.80**	**2.82**	**0.628** j	**0.259** j	0.240 U
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw	--	--	**31.2**	**105**	**10.8**	**3.93**	**3.77**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**32.6**	**21.3**	**6.93**	**1.89** j	**1.76** j
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw	--	--	**238**	**443**	**42.7**	**15.1**	**14.2**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**54.1**	**46.1**	**14.8**	**4.31** j	**3.89** j
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**172**	**319**	**64.1**	**12.7**	**13.1**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**132**	**144**	**34.8**	**11.4**	**11.4**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw	--	--	**1350**	**2190**	**299**	**88.1**	**91.7**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**6040**	**6870**	**1660**	**380**	**392**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw	--	--	**9450**	**12200**	**2960**	**744**	**777**
Octachlorodibenzo-P-Dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**97000**	**179000**	**41000**	**11700**	**15600**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**7.58**	**6.71**	**1.08**	**0.408** j	**0.495** j
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw	--	--	**64.8**	**124**	**21.0**	**8.64**	**9.61**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**14.3**	**16.2**	**4.73** j	**0.925** j	**0.941** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**42.4**	**64.1**	**17.7**	2.62 U	2.96 U
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw	--	--	**423**	**784**	**197**	**31.1**	**40.4**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**343**	**506**	**126**	**22.6**	**25.2**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**72.1**	**97.0**	**25.6**	**4.55** j	**4.91** j
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**3.26** j	**4.32** j	**1.35** j	**0.265** j	**0.338** j
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**41.2**	**42.6**	**11.0**	2.13 U	2.31 U
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw	--	--	**2330**	**3490**	**832**	**145**	**168**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**1270**	**1760**	**370**	**77.0**	**91.6**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**163**	**306**	**59.8**	**12.7**	**14.8**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw	--	--	**4840**	**8380**	**1360**	**269**	**332**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**3290**	**5240**	**779**	**195**	**251**
Dioxin Furan Calculated TEQ (ND=1/2 DL)	Calculated	pg/g dw	--	2	**238**	**305**	**74.3**	**16.6**	**18.1**

Notes:
"--" = No value available.
ND = 1/2DL = Non-detect values calculated as one-half the laboratory detection limit
Screening Level = Lower Duwamish Waterway Preliminary Cleanup Level Workbook Target Sediment Concentration (Ecology 2019).
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.
TEQ = Toxicity Equivalency Quotient to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD). Only positively identified compounds are included in TEQ calculation.
NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

PUBLIC REVIEW DRAFT
Table CC-5
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEFs	Location	Catch Basin	Stormwater Swale Solids		Tank Solids	
					CB-01	SWD-01	SWD-02	TANK-01	TANK-01
				Date	9/4/2012	9/4/2012	9/4/2012	9/4/2012	9/4/2012
				Sample ID	CB-01	SWD-01	SWD-02	TANK-01	DUP090412
				Screening Level					

Key:
CB = catch basin
DUP = field duplicate sample
DW = dry weight
pg/g dw = picograms per gram (1E-12 g/g) dry weight, equivalent to parts per trillion.
SWD = stormwater ditch
TANK = tank solids
TEF - toxicity equivalency factor
TEQ = toxicity equivalency quotient

Laboratory Data Qualifiers:
j = The value reported is less than the reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

PUBLIC REVIEW DRAFT

Table CC-6

Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Total Petroleum Hydrocarbons

5900 West Marginal Way Site

Seattle, Washington

Constituent	Method	Units	Location	Catch Basin		Stormwater Swale Solids	
				CB-01		SWD-02	
			Date	9/4/2012		9/4/2012	
			Sample ID	CB-01		SWD-02	
Diesel Range Organics	NWTPH-Dx	mg/kg	--	**3200**		**12**	
Motor Oil Range Organics	NWTPH-Dx	mg/kg	--	**15000**		**99**	

Notes:

-- = No value available.

Bold *text indicates that compound was detected.*

Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:

CB = catch basin

mg/kg = milligrams per kilogram equivalent to parts per million

SWD = stormwater ditch

PUBLIC REVIEW DRAFT
Table CC-7
Catch Basin, Swale, and Tank Stormwater Solids Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Location	Catch Basin	Stormwater Swale Solids		Tank Solids	
			CB-01	SWD-01	SWD-02	TANK-01	TANK-01
		Date	9/4/2012	9/4/2012	9/4/2012	9/4/2012	9/4/2012
		Sample ID	CB-01	SWD-01	SWD-02	TANK-01	DUP090412
		Units					
Conventionals							
Total Organic Carbon	SW9060M	%	**24.4**	**21.5**	**3.46** J-	**1.73**	**1.39**
Total Organic Carbon		kg/kg	**0.244**	**0.215**	**0.0346** J-	**0.0173**	**0.0139**
pH	SW9045	pH units	**7.21**	**6.02**	**6.73**	**8.32**	**8.36**
Grain Size							
>10 Phi clay	PSEP	%	**0.7**	**1.2**	2.7 U	**0.9**	**0.3**
9-10 Phi clay	PSEP	%	**0.4**	**0.6**	2.7 U	**1.2**	**1.6**
8-9 Phi clay	PSEP	%	**1.0**	**1.1**	2.7 U	**3.8**	**4.1**
Very fine silt	PSEP	%	**2.9**	**1.6**	2.7 U	**8.6**	**9.3**
Fine silt	PSEP	%	**4.5**	**1.8**	2.7 U	**13.4**	**14.8**
Medium silt	PSEP	%	**5.8**	**2.2**	2.7 U	**14.1**	**12.6**
Coarse silt	PSEP	%	**16.1**	**0.9**	2.7 U	**9.1**	**10.1**
Total Fines (silt + clay)	PSEP	%	**31.4**	**9.4**	**2.7**	**51.2**	**53.0**
Very fine sand	PSEP	%	**9.4**	**2.9**	**0.8**	**14.6**	**13.5**
Fine sand	PSEP	%	**10.7**	**5.8**	**3.8**	**12.8**	**12.3**
Medium sand	PSEP	%	**13.2**	**11.3**	**17.4**	**11.6**	**10.5**
Coarse sand	PSEP	%	**12.1**	**19.1**	**24.0**	**6.7**	**6.8**
Very coarse sand	PSEP	%	**17.9**	**28.5**	**30.2**	**2.5**	**2.2**
Gravel	PSEP	%	**5.3**	**23.0**	**21.2**	**0.6**	**1.8**
Total Solids							
Total Solids	SM2540B	%	**20.40**	**65.60**	**97.10**	**97.60**	**97.70**

Notes:
Bold *text indicates that compound was detected.*

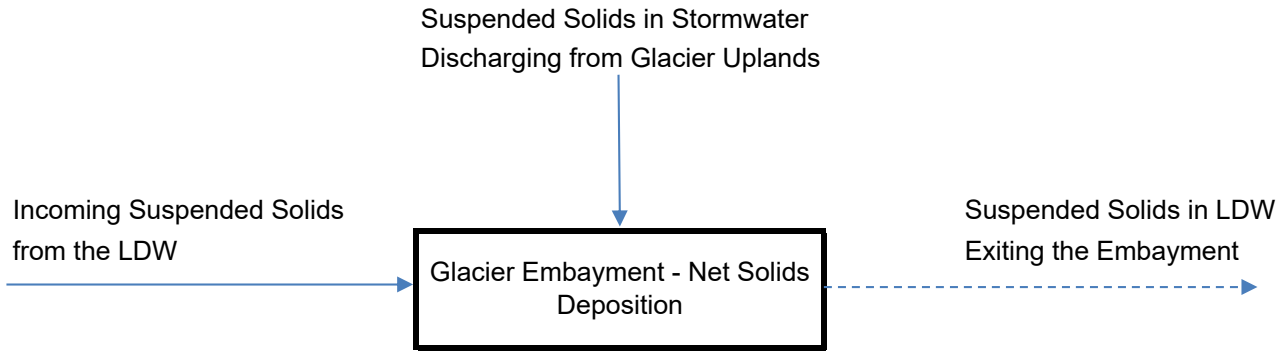
NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
% = percent
CB = catch basin
DUP = field duplicate sample
kg/kg = kilogram per kilogram
SWD = stormwater ditch
TANK = tank solids

Laboratory Data Qualifiers:
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.
J- = The detected results are qualified as estimated in accordance with NFGs, biased low.

APPENDIX DD STORMWATER SOLIDS MASS BALANCE BOX MODEL

PUBLIC REVIEW DRAFT
Figure DD-1
Box Model Construct
5900 West Marginal Way Site
Seattle, Washington



Notes:
LDW = Lower Duwamish Waterway
The box model calculation assumes the following:
- Contaminant of concern (COC) loading to sediment in the Embayment comes exclusively from deposition of stormwater solids containing COCs (i.e., COC concentrations on incoming solids from the LDW = 0).
- 100% of stormwater solids settle within an assumed depositional radius from the discharge location.
- COC concentrations on suspended solids in stormwater discharged to the LDW can be approximated using data from sampled and analyzed stormwater solids (e.g., catch basin solids).
- No dissolved-phase COC exchange between surface sediment and surface water in the LDW.
- A solid line indicates data included in the model calculation, and a dashed line indicates data that is not a part of the model calculation.
- Model does not include existing sediment concentrations or mixing of existing and new sediment inputs in order to focus on the potential contribution of stormwater solids to sediment concentrations within the Embayment. It does not represent the total concentration of COCs aquatic receptors may be exposed to.
- Redeposition of bank sediments is not included in the box model.

PUBLIC REVIEW DRAFT
Table DD-1
Sensitivity Analysis of Stormwater Solids Arsenic Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Arsenic						
		Sensitivity					
Input Parameters	**Base Case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	23.6	23.6	23.6	23.6	23.6	mg/kg	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.959	2.959	2.959	2.959	2.959	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	0.04	0.08	0.08	0.15	0.60	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	7.0					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2 /yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-2
Sensitivity Analysis of Stormwater Solids Copper Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Copper						
		Sensitivity					
Input Parameters	**Base Case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	338	338	338	338	338	mg/kg	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	0.54	1.09	1.09	2.16	8.54	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	390.0					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2/yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-3
Sensitivity Analysis of Stormwater Solids Zinc Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Zinc						
		Sensitivity					
Input Parameters	**Base Case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	955	955	955	955	955	mg/kg	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	1.54	3.09	3.07	6.12	24.14	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	410.0					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
$kg/km^2/yr$ = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-4
Sensitivity Analysis of Stormwater Solids Pentachlorophenol Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Pentachlorophenol						
		Sensitivity					
Input Parameters	**Base case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	0.31	0.31	0.31	0.31	0.31	mg/kg	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	4.99E-04	1.00E-03	9.96E-04	1.99E-03	7.84E-03	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	0.36					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
$kg/km^2/yr$ = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-5
Sensitivity Analysis of Stormwater Solids cPAHs Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	cPAHs						
		Sensitivity					
Input Parameters	**Base case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	0.413	0.413	0.413	0.413	0.413	mg/kg TEQ	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	0.5*π*r^2*d*ρ_d*0.929 where 0.929 is a unit conversion factor
Calculated Sediment Concentration	6.644E-04	1.335E-03	1.327E-03	2.645E-03	1.044E-02	mg/kg dw	C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)
Screening level (pCUL for protection of sediment via bank erosion)	0.09					mg/kg TEQ	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
cPAH TEQ = carcinogenic PAH toxicity equivalency quotient
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2/yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-6
Sensitivity Analysis of Stormwater Solids Polychlorinated Biphenyls Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	PCBs						
		Sensitivity					
Input Parameters	**Base case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	0.369	0.369	0.369	0.369	0.369	mg/kg-OC	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	5.936E-04	1.192E-03	1.185E-03	2.363E-03	9.328E-03	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	0.128					mg/kg - OC	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
$kg/km^2/yr$ = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
PCBs = polychlorinated biphenyls
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-7
Sensitivity Analysis of Stormwater Solids Dioxin and Furan Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Dioxins & Furans						
		Sensitivity					
Input Parameters	**Base case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	305	305	305	305	305	pg/g	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	0.49	0.99	0.98	1.95	7.71	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	2.00					pg/g dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2/yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-8
Sensitivity Analysis of Stormwater Solids Mercury Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Mercury						
		Sensitivity					
Input Parameters	**Base case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	0.21	0.21	0.21	0.21	0.21	mg/kg dw	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	3.38E-04	6.79E-04	6.75E-04	1.34E-03	5.31E-03	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	0.41					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2/yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-9
Sensitivity Analysis of Stormwater Solids Hexachlorobenzene Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

Input Parameters	Hexachlorobenzene					Units	Notes
		Sensitivity					
	Base case	A	B	C	D		
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	0.015	0.015	0.015	0.015	0.015	mg/kg dw	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	2.41E-05	4.85E-05	4.82E-05	9.61E-05	3.79E-04	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	0.022					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2/yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-10
Sensitivity Analysis of Stormwater Solids Benzyl Butyl Phthalate Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

	Benzyl Butyl Phthalate						
		Sensitivity					
Input Parameters	**Base case**	**A**	**B**	**C**	**D**	**Units**	**Notes**
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	0.054	0.054	0.054	0.054	0.054	mg/kg dw	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	8.69E-05	1.74E-04	1.73E-04	3.46E-04	1.37E-03	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	0.063					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
kg/km^2/yr = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

PUBLIC REVIEW DRAFT
Table DD-11
Sensitivity Analysis of Stormwater Solids Phenol Loading to Nearshore Sediment, Glacier Bay
5900 West Marginal Way Site
Seattle, Washington

Input Parameters	Phenol					Units	Notes
	Base case	Sensitivity					
		A	B	C	D		
Upland Drainage Area (A)	8	8	8	8	8	acres	Stormwater flows toward and is collected in a swale located near the middle of the Property; see Figure 2-4
Suspended Solids Loading Rate (R)	70	**140**	70	70	**140**	kg/acre/yr	Industrial land use; Green-Duwamish Watershed Water Quality Assessment (Herrera 2007)
On-Site Treatment Efficiency (t_{eff})	0	0	0	0	0	%	Assumption that no solids are retained in on-Site stormwater treatment system
Stormwater Solids Maximum Concentration Detected - (C_{max})	3.1	3.1	3.1	3.1	3.1	mg/kg dw	Maximum concentration detected on Site (Station CB-01; see Table CC-1 in Appendix CC of the RI)
Modeled LDW Sediment Deposition Rate (d)	2	2	**1**	2	**1**	cm/yr	Average-range net sedimentation rate in Glacier Bay (see Section 2.9.2 of the RI)
Surface Sediment Total Solids (TS)	47.8	47.8	47.8	47.8	47.8	% wet wt	Average TS value of Glacier Bay surface sediments (0 to 10 cm); see Table GG-6 in Appendix GG of the RI)
Outfall Sediment Deposition Radius (r)	200	200	200	**100**	**100**	ft	Based on sediment concentrations observed near other LDW outfalls (King County 2012)
Calculated Values							
Surface Sediment Dry Density (ρ_d)	2.96	2.96	2.96	2.96	2.96	gm/cm^3	Lefkovitz et al. (1997) regression: Wet density = 0.1737 * (5.0245 + e(0.0238*TS)) Dry density = wet density / (1 - moisture content) = wet density / TS
Deposition Area Sediment Load (M)	345,486	345,486	172,743	86,372	43,186	kg/yr	$0.5*\pi*r^2*d*\rho_d*0.929$ where 0.929 is a unit conversion factor
Calculated Sediment Concentration	4.99E-03	1.00E-02	9.96E-03	1.99E-02	7.84E-02	mg/kg dw	$C_{max}*(A*R*(1-t_{eff}))/(A*R*(1-t_{eff})+M)$
Screening level (pCUL for protection of sediment via bank erosion)	0.42					mg/kg dw	

Notes:

Bold Values = sensitivity parameters

In Columns A, B, and C, parameters individually changed by factor of 2 in a more conservative direction. Column D shows effect of changing all parameters by the same factor simultaneously.

% wet wt = percent wet weight
cm = centimeters
cm/yr = centimeters per year
dw = dry weight
ft = feet
gm/cm^3 = grams per cubic centimeter
kg/yr = kilograms per year
$kg/km^2/yr$ = kilograms per square kilometers per year
kg/acre/yr = kilograms per acre per year
mg/kg = milligrams per kilogram
RI = Remedial Investigation
TS = Total Solids

APPENDIX EE ANALYTICAL SUMMARY TABLES FOR HISTORICAL STORMWATER PIPE SOLIDS DATA

PUBLIC REVIEW DRAFT

Table EE-1

Stormwater Pipe Solids Analytical Results Summary - Metals

5900 West Marginal Way Site

Seattle, Washington

Constituent	Method	Units		Abandoned Historical Stormwater Pipe					
			Location	SWP-01		SWP-02		SWP-02	
			Date	8/4/2014		8/6/2014		8/6/2014	
			Sample ID	SWP-01-080414		SWP-02-080614		DUP-080614-1	
			Screening Level						
Metals									
Arsenic	EPA 200.8	mg/kg dw	7	**1390**		**1900**		**1740**	
Chromium	SW6010C	mg/kg dw	260	**53**		**52**		**59**	
Copper	SW6010C	mg/kg dw	390	**115**		**515**		**485**	
Zinc	SW6010C	mg/kg dw	410	**564**		**262**		**262**	

Notes:

Bold *text indicates that compound was detected.*

Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.

NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:

DUP = field duplicate sample

dw = dry weight

mg/kg = milligrams per kilogram, equivalent to parts per million

SWP = stormwater pipe

PUBLIC REVIEW DRAFT
Table EE-2
Stormwater Pipe Solids Analytical Results Summary - Semivolatile Organics & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF		Abandoned Historical Stormwater Pipe					
				Location	SWP-01		SWP-02		SWP-02	
				Date	8/4/2014		8/6/2014		8/6/2014	
				Sample ID	SWP-01-080414		SWP-02-080614		DUP-080614-1	
				Screening Level						
Total organic carbon	SW9060M	%	--	--	2.17	J	2.66			
Total organic carbon	SW9060M	kg/kg	--	--	0.0217		0.0266			
SVOCs										
Hexachlorobenzene	SW8270D-SIM	mg/kg - dw	--	0.022	0.064	U	0.022	U	0.022	U
Pentachlorophenol	SW8270D-SIM	mg/kg - dw	--	0.36	0.0016	U	0.0024	U		
Phenol	SW8270D-SIM	mg/kg - dw	--	0.42	0.11	U	0.037	U	0.037	U
2,4,5-Trichlorophenol	SW8270D-SIM	mg/kg - dw	--	16900	0.49	U	0.17	U	0.17	U
2,4,6-Trichlorophenol	SW8270D-SIM	mg/kg - dw	--	77.6	0.45	U	0.15	U	0.15	U
2,4-Dichlorophenol	SW8270D-SIM	mg/kg - dw	--	507	0.35	U	0.12	U	0.12	U
2-Chlorophenol	SW8270D-SIM	mg/kg - dw	--	845	0.068	U	0.023	U	0.024	U
2,3,4,6-Tetrachlorophenol	SW8270D-SIM	mg/kg - dw	--	5070	0.66	U	0.23	U	0.23	U
SVOCs - OC Normalized										
Hexachlorobenzene	SW8270D-SIM	mg/kg - OC	--	0.022	2.95	U	0.827	U		
Pentachlorophenol	SW8270D-SIM	mg/kg - OC	--	0.36	0.0737	U	0.0902	U		
Phenol	SW8270D-SIM	mg/kg - OC	--	0.42	5.07	U	1.39	U		
2,4,5-Trichlorophenol	SW8270D-SIM	mg/kg - OC	--	16900	22.6	U	6.39	U		
2,4,6-Trichlorophenol	SW8270D-SIM	mg/kg - OC	--	77.6	20.7	U	5.64	U		
2,4-Dichlorophenol	SW8270D-SIM	mg/kg - OC	--	507	16.1	U	4.51	U		
2-Chlorophenol	SW8270D-SIM	mg/kg - OC	--	845	3.13	U	0.865	U		
2,3,4,6-Tetrachlorophenol	SW8270D-SIM	mg/kg - OC	--	5070	30.4	U	8.65	U		

Notes:
"--" = No value available.
Empty cells = Not analyzed.
***Bold** text indicates that compound was detected.*
Light grey-shaded values indicate that the method detection limit exceeds the screening level.
Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
DUP = field duplicate sample
kg/kg = kilogram per kilogram
mg/kg - dw = milligrams per kilogram dry weight, equivalent to parts per million
mg/kg - OC = milligrams per kilogram organic carbon-normalized, equivalent to parts per million
OC = organic carbon
SVOC = semi-volatile organic compound
SWP = stormwater pipe
TEF = toxicity equivalency factor

Laboratory Data Qualifiers:
J = The detected results are qualified as estimated in accordance with NFGs.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

PUBLIC REVIEW DRAFT
Table EE-3
Stormwater Pipe Solids Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units		Abandoned Historical Stormwater Pipe					
			Location	SWP-01		SWP-02		SWP-02	
			Date	8/4/2014		8/6/2014		8/6/2014	
			Sample ID	SWP-01-080414		SWP-02-080614		DUP-080614-1	
			Screening Level						
PCBs									
Aroclor 1016	SW8082	mg/kg dw	NS	0.0016	U	0.0015	U	0.0015	U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0016	U	0.0015	U	0.0015	U
Aroclor 1232	SW8082	mg/kg dw	NS	0.01	U	0.014	U	0.0097	U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0016	U	0.0015	U	0.0015	U
Aroclor 1248	SW8082	mg/kg dw	NS	0.0016	U	0.0015	U	0.0015	U
Aroclor 1254	SW8082	mg/kg dw	NS	**0.024**		**0.012**		**0.018**	
Aroclor 1260	SW8082	mg/kg dw	NS	**0.034**		**0.015**		**0.015**	
Total PCBs (ND = 0) [1]	Calculated	mg/kg dw	0.128	**0.058**		**0.027**		**0.033**	
PCBs - OC Normalized									
Aroclor 1016	SW8082	mg/kg - OC	--	0.0737	U	0.0564	U		
Aroclor 1221	SW8082	mg/kg - OC	--	0.0737	U	0.0564	U		
Aroclor 1232	SW8082	mg/kg - OC	--	0.461	U	0.526	U		
Aroclor 1242	SW8082	mg/kg - OC	--	0.0737	U	0.0564	U		
Aroclor 1248	SW8082	mg/kg - OC	--	0.0737	U	0.0564	U		
Aroclor 1254	SW8082	mg/kg - OC	--	**1.11**		**0.451**			
Aroclor 1260	SW8082	mg/kg - OC	--	**1.57**		**0.564**			
Total PCBs (ND = 0) [1]	Calculated	mg/kg - OC	--	**2.68**		**1.02**			

Notes:
"--" = No value available.
Empty cells = Not analyzed.
[1] = Total PCBs are calculated such that non-detected PCBs are equal to zero.
***Bold** text indicates that compound was detected.*
NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
DUP = field duplicate sample
DW = dry weight
mg/kg dw = milligrams per kilogram dry weight, equivalent to parts per million
mg/kg - OC = milligrams per kilogram organic carbon-normalized, equivalent to parts per million
ND = 0 = non-detect values calculation method where only positively identified compounds are included.
NS = no screening level
OC = organic carbon
PCB = polychlorinated biphenyl
SWP = stormwater pipe

Laboratory Data Qualifiers:
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

PUBLIC REVIEW DRAFT

Table EE-4

Stormwater Pipe Solids Analytical Results Summary - Dioxins/Furans

5900 West Marginal Way Site

Seattle, Washington

Constituent	Method	Units	TEFs		Abandoned Historical Stormwater Pipe		
				Location	SWP-01	SWP-02	SWP-02
				Date	8/4/2014	8/6/2014	8/6/2014
				Sample ID	SWP-01-080414	SWP-02-080614	DUP-080614-1
				Screening Level			
Dioxins/Furans							
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**7.05**	1.74 U	1.91 U
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw	--	--	**61.1**	**18.6**	**18.4**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**72.3**	**15**	**16.4**
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw	--	--	**330**	**81.7**	**99.4**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**126**	**28.9**	**32.5**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**229**	**76.8**	**95.3**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**340**	**68**	**80.1**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw	--	--	**2050**	**573**	**681**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**6500**	**2350**	**2980**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw	--	--	**13400**	**4670**	**6060**
Octachlorodibenzo-P-Dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**211000**	**82700**	**108000**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**4.11**	**1.67** j	**1.72** j
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw	--	--	**74.8**	**33.9**	**37.9**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**5.33** j	**4.91** j	**5.4** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**11.9**	**13.9**	**16.2**
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw	--	--	**221**	**220**	**243**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**81.3**	**184**	**233**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**26.4**	**34.6**	**40.2**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**1.13** j	**2.31** j	**2.81** j
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**21.5**	**16.1**	**18.3**
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw	--	--	**635**	**979**	**1340**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**525**	**587**	**757**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**45**	**98.3**	**143**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw	--	--	**1280**	**2130**	**2860**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**1780**	**1500**	**1940**
Dioxin Furan Calculated TEQ (ND=1/2 DL)	Calculated	pg/g dw	--	2	**301**	**117**	**145**

Notes:

"--" = No value available.

ND = 0 = Non-detect values calculation method where only positively identified compounds are included.

ND = 1/2DL = Non-detect values calculated as one-half the laboratory detection limit

***Bold** text indicates that compound was detected.*

Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.

Light grey-shaded values indicate that the method detection limit exceeds the screening level.

TEQ = Toxicity Equivalency Quotient to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD). Only positively identified compounds are included in TEQ calculation.

for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

PUBLIC REVIEW DRAFT
Table EE-4
Stormwater Pipe Solids Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEFs		Abandoned Historical Stormwater Pipe		
				Location	SWP-01	SWP-02	SWP-02
				Date	8/4/2014	8/6/2014	8/6/2014
				Sample ID	SWP-01-080414	SWP-02-080614	DUP-080614-1
				Screening Level			

Key:
DUP = field duplicate sample
DW = dry weight
pg/g dw = picograms per gram (1E-12 g/g) dry weight, equivalent to parts per trillion.
SWP = stormwater pipe
TEF - toxicity equivalency factor

Laboratory Data Qualifiers:
j = The value reported is less than the reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

PUBLIC REVIEW DRAFT

Table EE-5

Stormwater Pipe Solids Analytical Results Summary - Conventionals

5900 West Marginal Way Site

Seattle, Washington

Constituent	Method		Abandoned Historical Stormwater Pipe			
		Location	SWP-01		SWP-02	
		Date	8/4/2014		8/6/2014	
		Sample ID	SWP-01-080414		SWP-02-080614	
		Units				
Conventionals						
Total Organic Carbon	SW9060M	%	**2.17**	J	**2.66**	
Total Organic Carbon		kg/kg	**0.0217**	J	**0.0266**	
pH	SW9045	pH units				
Grain Size						
>10 Phi clay	PSEP	%	**7.2**		**2.8**	
9-10 Phi clay	PSEP	%	**7.3**		**4.7**	
8-9 Phi clay	PSEP	%	**8.8**		**12.2**	
Very fine silt	PSEP	%	**14.9**		**14.3**	
Fine silt	PSEP	%	**21.0**		**10.6**	
Medium silt	PSEP	%	**17.6**		**10.0**	
Coarse silt	PSEP	%	**3.9**		**2.8**	
Total Fines (silt + clay)	PSEP	%	**80.6**		**57.4**	
Very fine sand	PSEP	%	**1.9**		**7.5**	
Fine sand	PSEP	%	**1.8**		**8.5**	
Medium sand	PSEP	%	**1.8**		**9.7**	
Coarse sand	PSEP	%	**2.7**		**9.9**	
Very coarse sand	PSEP	%	**2.2**		**6.0**	
Gravel	PSEP	%	**9.0**		**1.0**	
Total Solids						
Total Solids	SM2540B	%	**55.99**		**33.64**	

Notes:

Bold *text indicates that compound was detected.*

NFGs (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:

% = percent

kg/kg = kilogram per kilogram

SWP = stormwater pipe

Laboratory Data Qualifiers:

J = The detected results are qualified as estimated in accordance with NFGs.

APPENDIX FF ANALYTICAL SUMMARY TABLES FOR SEATTLE PUBLIC UTILITIES STORMWATER SOLIDS DATA

PUBLIC REVIEW DRAFT
Table FF-1
Seattle Public Utilities Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Right of Way Catch Basins			In-Line Solids	Sediment Trap	In-Line Solids							
					RCB53	RCB54	RCB55	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1	KEN-ST1
				Date	3/26/2006	3/26/2006	3/26/2006	9/10/2008	3/17/2009	3/17/2009	5/6/2010	11/18/2010	11/18/2010	6/20/2012	6/20/2012	4/25/2013	4/25/2013
				Sample ID	RCB53-032606	RCB54-032606	RCB55-032606	KEN-ST1-091008-G	KN-ST1-031709	KN-ST1-031709-G	KEN-ST1-050610G	KN-ST1-111810	KN-ST1-111810-G	KN-ST1-062012	KN-ST1-062012-G	KN-ST1-042513	KN-ST1-042513-G
				Screening Level [3]													
Metals (mg/kg-DW)																	
Arsenic	EPA 200.8	mg/kg -DW	--	7	**11**	**10**	**7**	**30**	**10**	**34**	**70**	**30**	**55**	8 U	**43**	**16**	**58**
Chromium	SW6010C	mg/kg -DW	--	260													
Copper	SW6010C	mg/kg -DW	--	390	**99**	**55.4**	**35.9**	**147**	**96.8**	**156**	**193**	**129**	**161**	**61.6**	**155**	**75.2**	**174**
Antimony	EPA 200.8	mg/kg -DW	--	87.7													
Beryllium	EPA 200.8	mg/kg -DW	--	438													
Cadmium	EPA 200.8	mg/kg -DW	--	5.1													
Lead	EPA 200.8	mg/kg -DW	--	450	**402**	**24**	**11**	**223**	**69**	**184**	**470**	**82**	**436**	**35**	**458**	**65**	**462**
Mercury	SW7471	mg/kg -DW	--	0.41	0.09 U	**0.06**	0.05 U	**0.4**	**0.11**	**0.19**	**0.42**	**0.18**	**0.32**	**0.09**	**0.33**	**0.18**	**0.32**
Nickel	EPA 200.8	mg/kg -DW	--	4380													
Silver	SW6010C	mg/kg -DW	--	6.1													
Thallium	EPA 200.8	mg/kg -DW	--	2.19													
Zinc	SW6010C	mg/kg -DW	--	410	**635**	**260**	**77.8**	**707**	**463**	**771**	**879**	**566**	**711**	**228**	**643**	**420**	**742**
PAHs (mg/kg-DW)																	
Acenaphthene	SW8270D	mg/kg -DW	--	0.5	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	**0.14**	0.1 U	**0.069** J	**0.03**	**0.073** J	0.099 U	**0.13**
Acenaphthylene	SW8270D	mg/kg -DW	--	1.3	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	**0.088**	0.1 U	0.11 U	0.018 U	0.077 U	0.099 U	**0.068**
Anthracene	SW8270D	mg/kg -DW	--	0.96	**0.53**	0.43 U	0.12 U	0.075 U	**0.25**	**0.16**	**1.4**	**0.14**	**0.2**	**0.12**	**0.22**	**0.074** J	**0.27**
Fluorene	SW8270D	mg/kg -DW	--	0.54	**0.29** J	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	**0.27**	**0.064** J	0.11 U	**0.047**	**0.058** J	0.099 U	**0.1**
Naphthalene	SW8270D	mg/kg -DW	--	2.1	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	**0.042** J	0.1 U	0.11 U	**0.033**	**0.046** J	**0.069** J	**0.096**
Phenanthrene	SW8270D	mg/kg -DW	--	1.5	**2.5**	**0.4** J	0.12 U	**0.085**	**1.2**	**0.31**	**3.3**	**0.56**	**0.32**	**0.41**	**0.39**	**0.38**	**0.53**
Benzo(a)anthracene	SW8270D	mg/kg -DW	0.1	1.3	**2.4**	0.43 U	0.12 U	**0.091**	**0.7**	**0.4**	**0.99** J	**0.28**	**0.15**	**0.37**	**0.34**	**0.25**	**0.43**
Benzo(a)pyrene	SW8270D	mg/kg -DW	1	1.6	**2.9**	0.43 U	0.12 U	**0.15**	**0.74**	**0.62**	**1.1**	**0.6**	**0.54**	**0.4**	**0.44**	**0.32**	**0.57**
Benzo(g,h,i)perylene	SW8270D	mg/kg -DW	--	0.67	**3.5**	0.43 U	0.12 U	**0.093**	**0.76**	**0.64** J	**0.56**	**2.3**	**1.3**	**0.32**	**0.27**	**0.42**	**0.44**
Chrysene	SW8270D	mg/kg -DW	0.01	1.4	**4.9**	**0.27** J	0.12 U	**0.21**	**1.4**	**0.71**	**2.4** J	**1.3**	**0.79**	**0.72**	**0.71**	**0.59**	**0.92**
Dibenzo(a,h)anthracene	SW8270D-SIM	mg/kg -DW	0.4	0.23	**0.62**	0.43 U	0.12 U	0.075 U	**0.25**	**0.16**	**0.19**	0.1 U	0.11 U	**0.12**	**0.12**	**0.13**	**0.13**
Fluoranthene	SW8270D	mg/kg -DW	--	1.7	**5.7**	**0.46**	0.12 U	**0.42**	**2.1**	**1.1**	**6.9**	**1.4**	**1.1**	**1**	**1**	**0.62**	**1.2**
Indeno(1,2,3-cd)pyrene	SW8270D	mg/kg -DW	0.1	0.6	**3.3**	0.43 U	0.12 U	**0.083**	**0.64**	**0.56** J	**0.59**	**0.45**	**0.31**	**0.28**	**0.24**	**0.37**	**0.35**
Pyrene	SW8270D	mg/kg -DW	--	2.6	**4.2**	**0.37** J	0.12 U	**0.29**	**1.8**	**0.94**	**2.9** J	**1**	**0.81**	**0.8**	**0.87**	**0.67**	**1.2**
Total (B+J+K) Benzofluoranthenes	SW8270D	mg/kg -DW	0.1	3.2	**9**	0.43 U	0.12 U	**0.61**	**2.3**	**1.72**	**3.4**	**0.47**	**0.41**	**1.2**	**1.1**	**1**	**1.4**
2-Methylnaphthalene	SW8270D	mg/kg -DW	--	0.67	**3.32**	**0.4** J	0.12 U	**0.085**	**1.45**	**0.47**	**5.24** J	**0.764** J	**0.589** J	**0.64**	**0.787** J	**0.523**	**1.194**
1-Methylnaphthalene	SW8270D	mg/kg -DW	--	29.4	**36.52** J	**1.1**	0.12 U	**1.947**	**10.69**	**6.85** J	**19.03** J	**7.8**	**5.41**	**5.21**	**5.09**	**4.424**	**6.732**
Total LPAH (ND = 0)	Calculated	mg/kg -DW	--	5.2													
Total HPAH (ND = 0)	SW8270D	mg/kg -DW	--	12	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	**0.045** J	0.1 U	0.11 U	**0.016** J	**0.05** J	**0.054** J	**0.092**
Sum of Carcinogenic PAHs (ND=0)	SW8270D	mg/kg -DW	--	--										0.018 UJ	0.077 U	0.099 U	**0.048** J
Carcinogenic PAH TEQ (ND=0) [1]	Calculated	mg/kg -DW	--	0.09	**4.7**	**0.0**	**0.0**	**0.2**	**1.2**	**1.0**	**1.7**	**0.7**	**0.6**	**0.6**	**0.7**	**0.5**	**0.8**
Carcinogenic PAH TEQ (ND=1/2 Detection Limit) [1]	Calculated	mg/kg -DW	--	0.09	**4.7**	**0.4**	**0.1**	**0.2**	**1.2**	**1.0**	**1.7**	**0.8**	**0.7**	**0.6**	**0.7**	**0.5**	**0.8**
PAHs OC Normalized (mg/kg - OC)																	
Acenaphthene [3]	SW8270D	mg/kg - OC	--	--													
Acenaphthylene [3]	SW8270D	mg/kg - OC	--	--													
Anthracene [3]	SW8270D	mg/kg - OC	--	--													
Fluorene [3]	SW8270D	mg/kg - OC	--	--													
Naphthalene [3]	SW8270D	mg/kg - OC	--	--													
Phenanthrene [3]	SW8270D	mg/kg - OC	--	--													
Benzo(a)anthracene [4]	SW8270D	mg/kg - OC	--	--													
Benzo(a)pyrene [4]	SW8270D	mg/kg - OC	--	--													
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg - OC	--	--													
Chrysene [4]	SW8270D	mg/kg - OC	--	--													
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg - OC	--	--													
Fluoranthene [4]	SW8270D	mg/kg - OC	--	--													
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg - OC	--	--													
Pyrene [4]	SW8270D	mg/kg - OC	--	--													
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg - OC	--	--													
2-Methylnaphthalene	SW8270D	mg/kg - OC	--	--													
1-Methylnaphthalene	SW8270D	mg/kg - OC	--	--													
Total LPAH (ND = 0)	Calculated	mg/kg - OC	--	--													
Total HPAH (ND = 0)	Calculated	mg/kg - OC	--	--													
Sum of Carcinogenic PAHs (ND=0)	Calculated	mg/kg - OC	--	--													
Carcinogenic PAH TEQ (ND=0) [2]	Calculated	mg/kg - OC	--	--													
Carcinogenic PAH TEQ (ND=1/2 Detection Limit) [2]	Calculated	mg/kg - OC	--	--													
SVOCs (mg/kg - DW)																	
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg -DW	--	0.031	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	0.077 U	0.1 U	0.11 U	0.018 U	0.077 U	0.099 U	0.068 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg -DW	--	0.036	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U				0.018 U	0.077 U	0.099 U	0.068 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg -DW	--	0.11	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	0.077 U	0.12 U	0.11 U	0.018 U	0.077 U	0.099 U	0.068 U
2,4-Dimethylphenol		mg/kg -DW	--	0.029	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	0.077 U	0.1 U	0.11 U	0.037 U	0.15 U	0.2 U	0.14 U
Benzoic acid		mg/kg -DW	--	0.65	4.6 U	4.3 U	1.2 U	0.75 U	1.5 U	1.2 U	0.77 U	1 U	1.1 U	**0.32** J	1.5 U	2 UJ	1.4 U
Benzyl alcohol	SW8270D-SIM	mg/kg -DW	--	0.057	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	0.077 U	0.1 U	0.11 U	**0.38**	**0.054** J	**0.47**	**0.11**
Dibenzofuran	SW8270D	mg/kg -DW	--	0.54	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	**0.099**	0.1 U	0.11 U	**0.031**	0.077 U	0.099 U	**0.068**

PUBLIC REVIEW DRAFT
Table FF-1
Seattle Public Utilities Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Right of Way Catch Basins						In-Line Solids		Sediment Trap		In-Line Solids													
					RCB53		RCB54		RCB55		KEN-ST1		KEN-ST1		KEN-ST1		KEN-ST1		KEN-ST1		KEN-ST1		KEN-ST1		KEN-ST1		KEN-ST1	
				Date	3/26/2006		3/26/2006		3/26/2006		9/10/2008		3/17/2009		3/17/2009		5/6/2010		11/18/2010		11/18/2010		6/20/2012		6/20/2012		4/25/2013		4/25/2013	
				Sample ID	RCB53-032606		RCB54-032606		RCB55-032606		KEN-ST1-091008-G		KN-ST1-031709		KN-ST1-031709-G		KEN-ST1-050610G		KN-ST1-111810		KN-ST1-111810-G		KN-ST1-062012		KN-ST1-062012-G		KN-ST1-042513		KN-ST1-042513-G	
				Screening Level [3]																								
Hexachlorobenzene	SW8270D-SIM	mg/kg -DW	--	0.022	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	0.077	U	0.1	U	0.11	U	0.018	U	0.077	U	0.099	U	0.068	U
Hexachlorobutadiene	SW8270D-SIM	mg/kg -DW	--	0.011	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	0.077	U	0.1	U	0.11	U	0.093	U	0.38	U	0.099	U	0.068	U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg -DW	--	0.028	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	**0.089**	NJ	0.1	U	**0.086**	J	**0.014**	J	**0.19**		0.099	U	**0.31**	
o-Cresol (2-Methylphenol)	SW8270D-SIM	mg/kg -DW	--	0.063	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	0.077	U	0.1	U	0.11	U	0.018	U	0.077	U	0.099	U	0.068	U
p-Cresol (4-Methylphenol)		mg/kg -DW	--	0.67	0.24	U	**0.32**	J	**0.12**	J	0.075	U	0.15	U	0.12	U	0.077	U	**0.13**		0.11	U	**0.075**		0.15	U	**0.05**	J	0.068	U
Pentachlorophenol	SW8270D-SIM	mg/kg -DW	--	0.36	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	U	0.38	U	0.53	U	**0.23**	J	0.18	U	**0.39**	J	0.99	U	0.68	U
Phenol		mg/kg -DW	--	0.42	**0.46**	J	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	**0.052**	J	0.1	U	0.11	U	**0.07**		**0.05**	J	**0.079**	J	**0.072**	
2,4,5-Trichlorophenol		mg/kg -DW	--	16900	2.3	U	4.3	U	1.2	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
2,4,6-Trichlorophenol		mg/kg -DW	--	77.6	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
2,4-Dichlorophenol		mg/kg -DW	--	507	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	U	0.38	U	0.53	U	0.57	U	0.18	U	0.77	U	0.99	U	0.68	U
2-Chlorophenol		mg/kg -DW	--	845	2.3	U	2.1	U	0.6	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
1,3-Dichlorobenzene		mg/kg -DW	--	NS	0.46	U	2.1	U	0.6	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
2,2-Oxybis(1-chloropropane)		mg/kg -DW	--	6760	0.46	U	2.1	U	0.6	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
2,3,4,6-Tetrachlorophenol		mg/kg -DW	--	5070																								
2,4-Dinitrophenol	SW8270D-SIM	mg/kg -DW	--	338	4.6	U	2.1	U	0.6	U	0.75	U	1.5	U	1.2	U							0.79	UJ	3.3	UJ	4.2	U	2.9	U
2,4-Dinitrotoluene		mg/kg -DW	--	2.75	**2.3**		0.43	U	0.12	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
2,6-Dinitrotoluene		mg/kg -DW	--	0.569	0.46	U	0.43	U	0.12	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
2-Chloronaphthalene		mg/kg -DW	--	13500	0.46	U	2.1	U	0.6	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
2-Nitroaniline		mg/kg -DW	--	1690	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
2-Nitrophenol		mg/kg -DW	--	NS	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
3,3'-Dichlorobenzidine		mg/kg -DW	--	1.9	2.3	U	4.3	U	1.2	U	0.37	U	0.76	U									0.14	UJ	0.58	U	0.74	U	0.51	U
3-Nitroaniline		mg/kg -DW	--	1690	4.6	U	0.43	U	0.12	U	0.37	U	0.76	U									0.093	U	0.38	U	0.5	U	0.34	U
4-Bromophenyl phenyl ether		mg/kg -DW	--	NS	2.3	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
4-Chloro-3-methylphenol		mg/kg -DW	--	NS	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	U	0.38	U	0.53	U	0.57	U	0.093	U	0.38	U	0.5	U	0.34	U
4-Chlorophenyl phenyl ether		mg/kg -DW	--	NS	**0.46**		2.1	U	0.6	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
4-Nitrophenol		mg/kg -DW	--	NS	0.46	U	0.43	U	0.12	U	0.37	U	0.76	U	0.61	U							0.093	U	0.38	U	0.5	U	0.34	U
Bis(2-chloroethoxy)methane		mg/kg -DW	--	NS	2.3	U	2.1	U	0.6	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
Carbazole		mg/kg -DW	--	NS	0.58	U	**0.43**		0.12	U	0.075	U	**0.15**		0.12	U	**0.42**		**0.096**	J	**0.066**	J	**0.081**	J	**0.096**		**0.089**	J	**0.14**	J
Dichloroethyl ether		mg/kg -DW	--	0.776	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
Dinitro-o-cresol		mg/kg -DW	--	NS	0.46	U	2.1	U	0.6	U	0.75	U	1.5	U	1.2	U							0.18	U	0.77	U	0.99	U	0.68	U
Hexachloroethane		mg/kg -DW	--	21.3	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	0.077	U	0.1	U	0.11	U	0.018	U	0.077	U	0.099	U	0.068	U
Hexachlorocyclopentadiene		mg/kg -DW	--	1010	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U	0.61	UJ							0.37	U	1.5	U	2	U	1.4	U
Isophorone		mg/kg -DW	--	898	0.46	U	0.43	U	0.12	U	0.075	U	0.15	U	0.12	U	0.077	U	0.1	U	0.11	U	0.018	U	0.077	U	0.099	U	0.068	U
Nitrobenzene		mg/kg -DW	--	338	0.43	U	0.12	U	0.56	U	0.075	U	0.15	U	0.12	U							0.018	U	0.077	U	0.099	U	0.068	U
n-Nitrosodi-n-propylamine		mg/kg -DW	--	0.122	0.43	U	0.12	U	0.56	U	0.37	U	0.76	U	0.61	U							0.018	U	0.077	U	0.099	U	0.068	U
p-Chloroaniline		mg/kg -DW	--	4.27	2.3	U	2.1	U	0.6	U	0.37	U	0.76	U									0.25	U	1	U	1.3	U	0.92	U
p-Nitroaniline		mg/kg -DW	--	NS	0.46	U	0.43	U	0.12	U	0.37	U	0.76	U									0.093	U	0.38	U	0.5	U	0.34	U
SVOCs OC Normalized (mg/kg-OC)																												
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg - OC	--	--																								
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg - OC	--	--																								
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg - OC	--	--																								
2,4-Dimethylphenol		mg/kg - OC	--	--																								
Benzoic acid		mg/kg - OC	--	--																								
Benzyl alcohol	SW8270D-SIM	mg/kg - OC	--	--																								
Dibenzofuran	SW8270D	mg/kg - OC	--	--																								
Hexachlorobenzene	SW8270D-SIM	mg/kg - OC	--	--																								
Hexachlorobutadiene	SW8270D-SIM	mg/kg - OC	--	--																								
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg - OC	--	--																								
o-Cresol	SW8270D-SIM	mg/kg - OC	--	--																								
p-Cresol		mg/kg - OC	--	--																								
Pentachlorophenol	SW8270D-SIM	mg/kg - OC	--	--																								
Phenol		mg/kg - OC	--	--																								
2,4,5-Trichlorophenol		mg/kg - OC	--	--																								
2,4,6-Trichlorophenol		mg/kg - OC	--	--																								
2,4-Dichlorophenol		mg/kg - OC	--	--																								
2-Chlorophenol		mg/kg - OC	--	--																								
1,3-Dichlorobenzene		mg/kg - OC	--	--																								
2,2-Oxybis(1-chloropropane)		mg/kg - OC	--	--																								
2,3,4,6-Tetrachlorophenol		mg/kg - OC	--	--																								
2,4-Dinitrophenol	SW8270D-SIM	mg/kg - OC	--	--																								
2,4-Dinitrotoluene		mg/kg - OC	--	--																								
2,6-Dinitrotoluene		mg/kg - OC	--	--																								
2-Chloronaphthalene		mg/kg - OC	--	--																								
2-Nitroaniline		mg/kg - OC	--	--																								
2-Nitrophenol		mg/kg - OC	--	--																								
3,3'-Dichlorobenzidine		mg/kg - OC	--	--																								
3-Nitroaniline		mg/kg - OC	--	--																								
4-Bromophenyl phenyl ether		mg/kg - OC	--	--																								
4-Chloro-3-methylphenol		mg/kg - OC	--	--																								
4-Chlorophenyl phenyl ether		mg/kg - OC	--	--																								

PUBLIC REVIEW DRAFT
Table FF-1
Seattle Public Utilities Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Right of Way Catch Basins			In-Line Solids	Sediment Trap	In-Line Solids							
				Date	3/26/2006	3/26/2006	3/26/2006	9/10/2008	3/17/2009	3/17/2009	5/6/2010	11/18/2010	11/18/2010	6/20/2012	6/20/2012	4/25/2013	4/25/2013
				Sample ID	RCB53-032606	RCB54-032606	RCB55-032606	KEN-ST1-091008-G	KN-ST1-031709	KN-ST1-031709-G	KEN-ST1-050610G	KN-ST1-111810	KN-ST1-111810-G	KN-ST1-062012	KN-ST1-062012-G	KN-ST1-042513	KN-ST1-042513-G
				Screening Level [3]													
4-Nitrophenol		mg/kg - OC	--	--													
Bis(2-chloroethoxy)methane		mg/kg - OC	--	--													
Carbazole		mg/kg - OC	--	--													
Dichloroethyl ether		mg/kg - OC	--	--													
Dinitro-o-cresol		mg/kg - OC	--	--													
Hexachloroethane		mg/kg - OC	--	--													
Hexachlorocyclopentadiene		mg/kg - OC	--	--													
Isophorone		mg/kg - OC	--	--													
Nitrobenzene		mg/kg - OC	--	--													
n-Nitrosodi-n-propylamine		mg/kg - OC	--	--													
p-Chloroaniline		mg/kg - OC	--	--													
p-Nitroaniline		mg/kg - OC	--	--													
Phthalate Esters - Dry Weight (mg/kg)																	
Benzyl butyl phthalate	SW8270D-SIM	mg/kg	--	0.063	**0.51**	**1.1**	**0.12**	0.075 U	**0.16**	**0.14**	**0.15** J	**0.16**	0.11 U	**0.072**	0.077 U	**0.27**	**0.33**
Bis(2-ethylhexyl)phthalate		mg/kg	--	1.3	**3.8**	**1.1**	**0.19**	**0.83**	**4.9** B	**2.1** B	**2.9** J	**5.5** B	**2** B	**1.4** B	**1.6**	**3.4**	**3.1**
Dibutyl Phthalate		mg/kg	--	1.4	0.46 U	0.43 U	0.12 U	**0.087**	0.15 U	**0.23**	**0.23**	0.1 U	**0.42**	**0.022**	**0.16**	0.099 U	**0.23**
Diethyl Phthalate	SW8270D-SIM	mg/kg	--	0.2	0.46 U	**0.43**	0.12 U	0.075 U	0.15 U	0.12 U	0.077 UJ	0.1 U	0.11 U	0.046 U	0.19 U	0.25 U	0.17 U
Dimethylphthalate	SW8270D-SIM	mg/kg	--	0.071	0.46 U	0.43 U	0.12 U	0.075 U	0.15 U	0.12 U	0.077 U	0.1 U	0.11 U	0.018 U	0.077 U	0.099 U	0.068 U
Di-n-octyl phthalate		mg/kg	--	6.2	0.46 U	**0.43**	0.12 U	0.075 U	**0.36**	0.12 U	0.077 U	0.1 U	0.11 U	**0.065**	0.077 U	**0.2**	0.068 U
Phthalate Esters - Organic Carbon Normalized (mg/kg-OC)																	
Benzyl butyl phthalate	SW8270D-SIM	mg/kg - OC	--	--													
Bis(2-ethylhexyl)phthalate		mg/kg - OC	--	--													
Dibutyl Phthalate		mg/kg - OC	--	--													
Diethyl Phthalate	SW8270D-SIM	mg/kg - OC	--	--													
Dimethylphthalate	SW8270D-SIM	mg/kg - OC	--	--													
Di-n-octyl phthalate		mg/kg - OC	--	--													
PCBs (mg/kg)																	
Aroclor 1016	SW8082	mg/kg	--	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.018 U	0.018 U	0.02 U	0.019 U
Aroclor 1221	SW8082	mg/kg	--	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.018 U	0.018 U	0.02 U	0.019 U
Aroclor 1232	SW8082	mg/kg	--	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.018 U	0.018 U	0.02 U	0.019 U
Aroclor 1242	SW8082	mg/kg	--	NS	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.02 U	0.018 U	0.018 U	0.02 U	0.019 U
Aroclor 1248	SW8082	mg/kg	--	NS	0.039 U	**0.02** Y	0.02 U	**0.068**	**0.05** Y	**0.026**	**0.1** Y	**0.051**	**0.083**	**0.052**	0.018 U	0.03 U	0.097 U
Aroclor 1254	SW8082	mg/kg	--	NS	**0.058**	**0.02**	0.02 U	**0.13**	**0.1**	**0.069**	**0.2**	**0.071**	**0.12**	**0.077** J	0.018 UJ	**0.069**	**0.37**
Aroclor 1260	SW8082	mg/kg	--	NS	0.039 U	**0.02** Y	0.02 U	**0.1**	0.02 U	**0.072**	**0.2**	**0.065**	**0.2**	**0.05**	0.018 U	**0.024**	**0.34**
Total PCBs (ND = 0) [4]	SW8082	mg/kg	--	0.128	**0.058**	**0.02**	0.02 U	**0.298**	**0.10**	**0.167**	**0.40**	**0.187**	**0.403**	**0.179** J	0.018 U	**0.093**	**0.71**
PCBs - OC Normalized (mg/kg-OC)																	
Aroclor 1016	SW8082	mg/kg - OC	--	--													
Aroclor 1221	SW8082	mg/kg - OC	--	--													
Aroclor 1232	SW8082	mg/kg - OC	--	--													
Aroclor 1242	SW8082	mg/kg - OC	--	--													
Aroclor 1248	SW8082	mg/kg - OC	--	--													
Aroclor 1254	SW8082	mg/kg - OC	--	--													
Aroclor 1260	SW8082	mg/kg - OC	--	--													
Total PCBs (ND = 0)	SW8082	mg/kg - OC	--	--													
Dioxins/Furans (pg/g dw)																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05				**1.7**									
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw	--	--													
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--				**8.58**									
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw	--	--													
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--				**16.2**									
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--				**81.1**									
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--				**38.2**									
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw	--	--													
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--				**1530** B									
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw	--	--													
Octachlorodibenzo-P-Dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--				**11600** B									
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--				**2.81**									
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw	--	--													
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--				**4.72**									
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--				**4.88**									
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw	--	--													
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--				**14.1**									
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--				**9.46**									
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--				**15.4**									
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--				**0.51** KJ									
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw	--	--													
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--				**176** B									
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--				**7.28** J									

PUBLIC REVIEW DRAFT
Table FF-1
Seattle Public Utilities Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	TEF	Location	Right of Way Catch Basins			In-Line Solids	Sediment Trap	In-Line Solids							
				Date	3/26/2006	3/26/2006	3/26/2006	9/10/2008	3/17/2009	3/17/2009	5/6/2010	11/18/2010	11/18/2010	6/20/2012	6/20/2012	4/25/2013	4/25/2013
				Sample ID	RCB53-032606	RCB54-032606	RCB55-032606	KEN-ST1-091008-G	KN-ST1-031709	KN-ST1-031709-G	KEN-ST1-050610G	KN-ST1-111810	KN-ST1-111810-G	KN-ST1-062012	KN-ST1-062012-G	KN-ST1-042513	KN-ST1-042513-G
				Screening Level [3]													
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw	--	--													
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--				**411**									
Dioxin Furan Calculated TEQ (ND=0) [3]	Calculated	pg/g dw	--	2				**50.4**									
Dioxin Furan Calculated TEQ (ND=1/2 DL)	Calculated	pg/g dw	--	2				**50.4**									
TPH (mg/kg)																	
Diesel Range Organics	NWTPH-Dx	mg/kg	--	NS	330 U	**210**	**91**	**130**	**870**	**870**	**660**	**260**	**500**	**180**	**1200**	**790**	**1200**
Motor Oil Range Organics	NWTPH-Dx	mg/kg	--	NS	**1700**	**1200**	**630**	**660**	**4700**	**4600**	**2300**	**1500**	**2200**	**700**	**3100**	**1400**	**2100**
Conventionals																	
Total Organic Carbon (%)	SW9060M	%	--	--	**5.22**	**2.23**	**1.02**	**4.48**	**3.65**	**5.03**	**4.03**	**7.82**	**3.9**	**5.24**	**4.97**	**4.34**	**3.82**
Total Organic Carbon (kg/kg)		kg/kg		NS	**0.0522**	**0.0223**	**0.0102**	**0.0448**	**0.0365**	**0.0503**	**0.0403**	**0.0782**	**0.039**	**0.0524**	**0.0497**	**0.0434**	**0.0382**
pH	SW9045	pH units	--	--													
Grain Size (%)																	
>10 Phi clay	PSEP	%	--	--				**5.6**		**7.3**	**7.4**	**8**	**6.2**	**4.7**	**5.8**	**6.5**	**7**
9-10 Phi clay	PSEP	%	--	--				**4.5**		**6.7**	**5.9**	**4.2**	**6.8**	**2.2**	**6.6**	**4.6**	**5.2**
8-9 Phi clay	PSEP	%	--	--				**4.6**		**9.2**	**9.1**	**4.3**	**10.5**	**2.7**	**9.9**	**4.9**	**8.6**
Very fine silt	PSEP	%	--	--				**11.3**		**18.2**	**14.9**	**7.4**	**16.7**	**5**	**16.7**	**8.3**	**15.8**
Fine silt	PSEP	%	--	--				**23.6**		**23.4**	**21.7**	**20.1**	**24.2**	**12.5**	**22.9**	**22.5**	**22.6**
Medium silt	PSEP	%	--	--				**21.4**		**18.8**	**17.4**	**28.6**	**19.7**	**18.2**	**18.5**	**18.8**	**15**
Coarse silt	PSEP	%	--	--				**8.4**		**8.9**	**9.5**	**5.5**	**4.1**	**22.1**	**6.7**	**15.4**	**10.9**
Total Fines (silt + clay)	PSEP	%	--	--				**79.4**									
Very fine sand	PSEP	%	--	--				**4.3**		**2.9**	**4.2**	**8.7**	**3.3**	**16.3**	**3.6**	**6.1**	**4.2**
Fine sand	PSEP	%	--	--				**3.4**		**1.5**	**3.1**	**5.1**	**2.2**	**8**	**2.4**	**4.3**	**3.2**
Medium sand	PSEP	%	--	--				**2.6**		**1.1**	**2.2**	**1.8**	**1.5**	**5.1**	**2**	**3.2**	**3.3**
Coarse sand	PSEP	%	--	--				**2.4**		**0.9**	**2**	**1.2**	**1.5**	**2.2**	**2**	**2.2**	**2.7**
Very coarse sand	PSEP	%	--	--				**3.8**		**0.7**	**1.8**	**2**	**2**	**1.2**	**2.7**	**3.1**	**1.2**
Gravel	PSEP	%	--	--				**4.1**		**0.5**	**0.9**	**3.1**	**1.1**	**0.1**	**0.2**	**0.1**	**0.3**
Total Solids (%)																	
Total Solids	SM2540B	%	--	--	**66**	**70.6**	**82.2**	**45.6**	**49.2**	**51.5**	**50.8**		**37.7**	**38.1**	**52.8**	**50.41**	**52.38**

Notes:
-- = No value available.
Empty cells = Not analyzed.
ND=1/2DL = Non-detect values calculated as one-half the laboratory detection limit
[1] = Toxicity Equivalency Quotient calculations for cPAHs were calculated in accordance with WAC 173-340-200 and WAC 173-340-900, Table 708-2 using benzo(a)pyrene as the reference chemical. If all compounds non-detect, then detection limit equal to maximum detection limit (modified by chemical's toxicity factor).
[2] = Screening levels established in Ecology Lower Duwamish Waterway Workbook (April 2019).
[3] = Toxicity Equivalency Quotient calculations for D/F TEQ were calculated in accordance with WAC 173-340-900, Table 708-1 using 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) as the reference chemical. Only positively identified compounds are included in TEQ calculation. Non-detected compounds are equal to one-half the detection limit.
[4] = Total PCBs are calculated where non-detected PCBs are equal to zero.
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.
NFG (National Functional Guidelines) = U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 or USEPA Contract. Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.

Key:
HPAH = heavy polycyclic aromatic hydrocarbon
KEN = Kenny Street Station
kg/kg = kilogram per kilogram
LPAH = light polycyclic aromatic hydrocarbon
mg/kg DW = milligrams per kilogram dry weight, equivalent to parts per million
mg/kg - OC = milligrams per kilogram organic carbon-normalized, equivalent to parts per million
NS = Not sampled
PAH = polycyclic aromatic hydrocarbon
PCB = polychlorinated biphenyls
pg/g dw = picograms per gram dry weight
RCB = right-of-way catch basin
SPU = Seattle Public Utilities
SVOC = semi-volatile organic compound
TPH = Total Petroleum Hydrocarbons
TEF = toxicity equivalency factor
TEQ = toxicity equivalency quotient

Laboratory Data Qualifiers:
J = The detected results are qualified as estimated in accordance with NFGs.
NJ = TIC has been identified and has a CAS RN
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.
UJ = Non-detected compound qualified as estimated in accordance with NFGs.
KJ = A peak was detected that did not meet all the criteria for identification as the target analyte; the reported value is the estimated maximum possible concentration of the analyte present. (SPU Data)
B = Analyte detected in an associated Method Blank at a concentration greater than 0.5 the reporting limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample (SPU Data)
Y = Analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. Y flag is equivalent to U flag with a raised reporting limit. (SPU Data)

PUBLIC REVIEW DRAFT
Table FF-2
Port of Seattle Property Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

	Location ID	T115-CB-313	T115-CB-322	T115-CB-323	T115-CB-323	T115-CB-324	T115-CB-328
	Sample Date	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14
	Sample Type	N	N	N	FD	N	N
	Depth	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
	Sample ID	T115N_S_CB-313_01162014	T115N_S_CB-322_01162014	T115N_S_CB-323_01162014	T115N_S_CB-323DUP_01162014	T115N_S_CB-324_01162014	T115N_S_CB-328_01162014
Analyte	**Unit**						
Metals (mg/kg-DW)							
Arsenic	mg/kg	**20**	**10**	**4.6**	**3.5**	**10**	**25**
Chromium	mg/kg	**100**	**79**	**33**	**29**	**50**	**96**
Copper	mg/kg	**220**	**140**	**100**	**110**	**130**	**530**
Zinc	mg/kg	**2,700**	**2,300**	**910 J**	**2,000 J**	**910**	**2,300**
Antimony	mg/kg	**7.2**	*< 5*	*< 5*	*< 5*	*< 5*	**25**
Barium	mg/kg	**350**	**330**	**130**	**120**	**130**	**220**
Beryllium	mg/kg	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Cadmium	mg/kg	**1.8**	**1.6**	**0.72**	**1.1**	**1.3**	**3.2**
Tin	mg/kg	**100**	**600**	**10,000 J**	**15,000 J**	**490**	**220**
Lead	mg/kg	**180**	**120**	**61**	**74**	**79**	**330**
Nickel	mg/kg	**69**	**52**	**30**	**29**	**43**	**54**
Mercury	mg/kg	**0.38**	**0.094**	**0.094**	**0.091**	**0.18**	**0.22**
Selenium	mg/kg	**1.3**	**0.8**	*< 0.5*	*< 0.5*	**0.98**	**0.98**
Silver	mg/kg	**0.52**	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	**0.81**
Thallium	mg/kg	*< 0.25*	*< 0.25*	*< 0.25*	*< 0.25*	*< 0.25*	*< 0.25*
SVOCs (µg/kg)							
Pentachlorophenol	µg/kg	*< 1,500 J*	*< 1,200 J*	*< 1,500 J*	*< 1,200 J*	*< 1,800 J*	*< 1,200 J*
2,3,4,6-Tetrachlorophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,3,5,6-Tetrachlorophenol	µg/kg	*< 290 J*	*< 230 J*	*< 290 J*	*< 230 J*	*< 380 J*	*< 230 J*
2,4,5-Trichlorophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,4,6-Trichlorophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,4-Dichlorophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2-Chlorophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Phenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Hexachlorobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
1,2,4-Trichlorobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
1,2-Dichlorobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
1,2-Diphenylhydrazine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
1,3-Dichlorobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
1,4-Dichlorobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,2-Oxybis(2-chloropropane)	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,4-Dimethylphenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,4-Dinitrophenol	µg/kg	*< 1,500 J*	*< 1,200 J*	*< 1,500 J*	*< 1,200 J*	*< 1,800 J*	*< 1,200 J*
2,4-Dinitrotoluene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2,6-Dinitrotoluene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2-Chloronaphthalene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2-Nitroaniline	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
2-Nitrophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
3,3'-Dichlorobenzidine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
3-Nitroaniline	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
4-Bromophenyl phenyl ether	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
4-Chloro-3-methylphenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
4-Chlorophenyl phenyl ether	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
4-Nitrophenol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Benzoic acid	µg/kg	*< 1,500 J*	*< 1,200 J*	*< 1,500 J*	*< 1,200 J*	*< 1,800 J*	*< 1,200 J*
Benzyl alcohol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*

PUBLIC REVIEW DRAFT
Table FF-2
Port of Seattle Property Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

	Location ID	T115-CB-313	T115-CB-322	T115-CB-323	T115-CB-323	T115-CB-324	T115-CB-328
	Sample Date	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14
	Sample Type	N	N	N	FD	N	N
	Depth	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
	Sample ID	T115N_S_CB-313_01162014	T115N_S_CB-322_01162014	T115N_S_CB-323_01162014	T115N_S_CB-323DUP_01162014	T115N_S_CB-324_01162014	T115N_S_CB-328_01162014
Analyte	Unit						
Benzyl butyl phthalate	µg/kg	**1,400**	*< 230*	*< 290*	*< 230*	*< 380*	**5,000**
Bis(2-chloroethoxy)methane	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Bis(2-ethylhexyl)phthalate	µg/kg	**12,000**	**48,000**	**9,700 J**	**20,000 J**	**18,000**	**12,000**
Carbazole	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Dibutyl Phthalate	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	**680**
Dichloroethyl ether	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Diethyl Phthalate	µg/kg	*< 1,500*	*< 1,200*	*< 1,500*	*< 1,200*	*< 1,800*	*< 1,200*
Dimethylphthalate	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Dinitro-o-cresol	µg/kg	*< 1,500 J*	*< 1,200 J*	*< 1,500 J*	*< 1,200 J*	*< 1,800 J*	*< 1,200 J*
Di-n-octyl phthalate	µg/kg	*< 290*	*< 230*	*< 290 J*	**2,000 J**	*< 380*	*< 230*
Hexachloroethane	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Hexachlorocyclopentadiene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Hexachlorobutadiene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Hexachlorobutadiene	µg/kg	*< 13 J*	*< 9.2 J*	*< 11*	*< 8.9*	*< 15 J*	*< 6.5*
Benzidine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Isophorone	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Nitrobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
n-Nitrosodimethylamine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
n-Nitrosodi-n-propylamine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
n-Nitrosodiphenylamine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
o-Cresol	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
p-Chloroaniline	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
p-Nitroaniline	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
1,4-Dinitrobenzene	µg/kg	*< 290 J*	*< 230 J*	*< 290 J*	*< 230 J*	*< 380 J*	*< 230 J*
1,3-Dinitrobenzene	µg/kg	*< 1,500 J*	*< 1,200 J*	*< 1,500 J*	*< 1,200 J*	*< 1,800 J*	*< 1,200 J*
1,2-Dinitrobenzene	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
3 & 4-Methylphenol	µg/kg	*< 290*	*< 230*	*< 290 J*	**1,100 J**	**1,400**	*< 230*
Pyridine	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Octadecane	µg/kg	**2,300 J**	*< 230 J*	*< 290 J*	*< 230 J*	**1,100 J**	*< 230 J*
n-Decane	µg/kg	*< 290 J*	*< 230 J*	*< 290 J*	*< 230 J*	*< 380 J*	*< 230 J*
Bis(2-Ethylhexyl) Adipate	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Aniline	µg/kg	*< 1,500*	*< 1,200*	*< 1,500*	*< 1,200*	*< 1,800*	*< 1,200*
2,3-Dichloroaniline	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
PAHs (µg/kg)							
1-Methylnaphthalene	µg/kg	*< 58*	*< 46*	*< 57*	*< 47*	*< 76*	*< 46*
2-Methylnaphthalene	µg/kg	66	*< 46*	*< 57*	*< 47*	*< 76*	*< 46*
Acenaphthene	µg/kg	*< 58*	*< 46*	*< 57*	*< 47*	*< 76*	*< 46*
Acenaphthylene	µg/kg	**180**	*< 46*	*< 57*	*< 47*	*< 76*	**77**
Anthracene	µg/kg	**340**	**50**	*< 57*	*< 47*	*< 76*	**190**
Benzo(a)anthracene	µg/kg	**1,500**	**220**	**140**	**180**	**220**	**300**
Benzo(a)pyrene	µg/kg	**1,100**	**200**	**130**	**130**	**210**	**270**
Benzo(b)fluoranthene	µg/kg	**2,200**	**400**	**250**	**270**	**440**	**710**
Benzo(g,h,i)perylene	µg/kg	**1,400**	**330**	**210**	**210**	**360**	**470**
Chrysene	µg/kg	**2,900**	**420**	**310**	**350**	**490**	**720**
Dibenzo(a,h)anthracene	µg/kg	**250**	**58**	*< 57*	*< 47*	*< 76*	**78**
Dibenzofuran	µg/kg	*< 290*	*< 230*	*< 290*	*< 230*	*< 380*	*< 230*
Fluoranthene	µg/kg	**2,600**	**320**	**270**	**370**	**390**	**720**
Fluorene	µg/kg	**140**	*< 46*	*< 57*	**48**	*< 76*	**64**

PUBLIC REVIEW DRAFT
Table FF-2
Port of Seattle Property Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

	Location ID	T115-CB-313	T115-CB-322	T115-CB-323	T115-CB-323	T115-CB-324	T115-CB-328
	Sample Date	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14
	Sample Type	N	N	N	FD	N	N
	Depth	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
	Sample ID	T115N_S_CB-313_01162014	T115N_S_CB-322_01162014	T115N_S_CB-323_01162014	T115N_S_CB-323DUP_01162014	T115N_S_CB-324_01162014	T115N_S_CB-328_01162014
Analyte	**Unit**						
Indeno(1,2,3-cd)pyrene	µg/kg	**750**	**160**	**99**	**110**	**170**	**210**
Naphthalene	µg/kg	**85**	*< 46*	*< 57*	*< 47*	*< 76*	48
Phenanthrene	µg/kg	**1,100**	**150**	**150**	**170**	**200**	**320**
Pyrene	µg/kg	**2,500**	**350**	**270**	**340**	**370**	**730**
Benzo(j+k)fluoranthene	mg/kg	**0.38**	**0.085**	*< 0.057*	**0.068**	**0.098**	**0.19**
PCBs (µg/kg)							
Aroclor 1016	µg/kg	*< 73*	*< 57*	*< 72*	*< 58*	*< 95*	*< 58*
Aroclor 1221	µg/kg	*< 73*	*< 57*	*< 72*	*< 58*	*< 95*	*< 58*
Aroclor 1232	µg/kg	*< 73*	*< 57*	*< 72*	*< 58*	*< 95*	*< 58*
Aroclor 1242	µg/kg	*< 73*	*< 57*	*< 72*	*< 58*	*< 95*	*< 58*
Aroclor 1248	µg/kg	*< 73*	*< 57*	*< 72*	*< 58*	*< 95*	*< 58*
Aroclor 1254	µg/kg	**130**	*< 57*	*< 72*	*< 58*	*< 95*	**95**
Aroclor 1260	µg/kg	*< 73*	*< 57*	*< 72*	*< 58*	*< 95*	**62**
Total Aroclor (ND=0)	µg/kg	**130**	0	0	0	0	**157**
Dioxins/Furans (pg/g)							
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	pg/g	**1.18**	**1.65**	**1.68**	**1.94**	**0.749**	**1.72**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/g	**5.08**	**3.72**	**2.62 J**	**2.91 J**	**3.76**	**13.1**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	**8.24**	**5.18**	**2.95**	**3.58 J**	**5.73**	**25.2**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	**25**	**11.3**	**7.99**	**9.52**	**12.8**	**65.8**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/g	**17.9**	**9.95**	**7.38**	**8.61**	**12.1**	**49.7**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/g	**849**	**303**	**224**	**284**	**353**	**2,210**
Octachlorodibenzo-P-Dioxin (OCDD)	pg/g	**11,400**	**3,030**	**2,220**	**2,900**	**3,260**	**25,700**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/g	**1.66**	**1.95**	**0.901**	**1.03**	**1.35**	**2.68**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	**1.8 J**	**1.69 J**	**0.814 J**	**0.834 J**	**1.08 J**	**2.83**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/g	**2.85**	**1.58 J**	**0.832 J**	**0.932 J**	**1.67 J**	**3.61**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	**8.79**	**3.93**	**2.29 J**	**2.77 J**	**4.01**	**13.2**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	**7.44**	**3.92**	**2.08 J**	**2.49 J**	**3.7**	**11.3**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/g	**1.05 J**	**0.58 J**	**0.187 J**	**0.575 J**	**0.482 J**	**0.617 J**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/g	**10.6**	**5.38**	**2.89**	**3.47 J**	**5.43**	**16.8**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/g	**167**	**67.1**	**36.9**	**41.7**	**67.3**	**267**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/g	**14.5**	**4.9**	**2.79**	**3.23 J**	**4.75**	**19.9**
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/g	**789**	**253**	**113**	**134**	**238**	**1,170**
Calculated TEQ (ND=0)	pg/g	**29**	**15**	**11**	**13**	**15**	**68**
Calculated TEQ (ND=1/2 DL)	pg/g	**29**	**15**	**11**	**13**	**15**	**68**
VOCs (µg/kg)							
1,1,1,2-Tetrachloroethane	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,1,1-Trichloroethane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,1,2,2-Tetrachloroethane	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
1,1,2-Trichloroethane	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,1-Dichloroethane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,1-Dichloroethene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,1-Dichloropropene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,2,3-Trichlorobenzene	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
1,2,3-Trichloropropane	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
1,2,4-Trimethylbenzene	µg/kg	**31 J**	**7.1 J**	*< 2.1*	*< 1.8*	**7.5 J**	*< 1.3*
1,2-Dibromo-3-chloropropane	µg/kg	*< 13 J*	*< 9.2 J*	*< 11*	*< 8.9*	*< 15 J*	*< 6.5*

PUBLIC REVIEW DRAFT
Table FF-2
Port of Seattle Property Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

	Location ID	T115-CB-313	T115-CB-322	T115-CB-323	T115-CB-323	T115-CB-324	T115-CB-328
	Sample Date	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14
	Sample Type	N	N	N	FD	N	N
	Depth	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
	Sample ID	T115N_S_CB-313_01162014	T115N_S_CB-322_01162014	T115N_S_CB-323_01162014	T115N_S_CB-323DUP_01162014	T115N_S_CB-324_01162014	T115N_S_CB-328_01162014
Analyte	**Unit**						
1,2-Dichloroethane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,2-Dichloropropane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
1,3,5-Trimethylbenzene	µg/kg	**18 J**	**3.9 J**	*< 2.1*	*< 1.8*	**3.2 J**	*< 1.3*
1,3-Dichloropropane	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
2,2-Dichloropropane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
2-Butanone	µg/kg	**170**	**79**	**79 J**	**24 J**	**96**	**25**
2-Chloroethyl vinyl ether	µg/kg	*< 13 J*	*< 9.2 J*	*< 11 J*	*< 8.9 J*	*< 15 J*	*< 6.5 J*
2-Hexanone	µg/kg	*< 13 J*	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*
2-Phenylbutane	µg/kg	**6.1 J**	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
4-Chlorotoluene	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
4-Methyl-2-pentanone	µg/kg	**43**	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*
Acetone	µg/kg	**670 J**	**310**	**160 J**	**96 J**	**360**	**98**
Benzene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Bromobenzene	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
Bromodichloromethane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Bromoform	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Carbon disulfide	µg/kg	**19**	**6**	*< 2.1*	*< 1.8*	**17**	**2.6**
Carbon tetrachloride	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Chlorobenzene	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Chlorobromomethane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Chloroethane	µg/kg	*< 13*	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*
Chloroform	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
cis-1,2-Dichloroethene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
cis-1,3-Dichloropropene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Cumene	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Cymene	µg/kg	**97 J**	**200 J**	**5.5**	**6.7**	**3,800**	*< 1.3*
Dibromochloromethane	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Dibromomethane	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Ethylbenzene	µg/kg	**13 J**	*< 1.8*	*< 2.1*	*< 1.8*	**17**	*< 1.3*
Ethylene dibromide	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Freon 11	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
m,p Xylenes	µg/kg	**18 J**	**4.6**	*< 4.2*	*< 3.5*	*< 5.9*	*< 2.6*
Methyl bromide	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Methyl chloride	µg/kg	*< 13*	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*
Methyl iodide	µg/kg	*< 13*	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*
Methyl tert-butyl ether	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Methylene chloride	µg/kg	*< 13*	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*
n-Butylbenzene	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
n-Propylbenzene	µg/kg	3.6 J	*< 1.8 J*	*< 2.1*	*< 1.8*	**3.1 J**	*< 1.3*
o-Chlorotoluene	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
o-Xylene	µg/kg	**19 J**	**4.4**	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Styrene	µg/kg	*< 2.6 J*	**2.2**	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
tert-Butylbenzene	µg/kg	*< 2.6 J*	*< 1.8 J*	*< 2.1*	*< 1.8*	*< 3 J*	*< 1.3*
Tetrachloroethene	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Toluene	µg/kg	**48**	**21**	*< 11*	*< 8.9*	**830 J**	*< 6.5*
trans-1,2-Dichloroethene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
trans-1,3-Dichloropropene	µg/kg	*< 2.6 J*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Trichloroethene	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Vinyl acetate	µg/kg	*< 13*	*< 9.2*	*< 11*	*< 8.9*	*< 15*	*< 6.5*

PUBLIC REVIEW DRAFT
Table FF-2
Port of Seattle Property Stormwater Solids Analytical Results Summary
5900 West Marginal Way Site
Seattle, Washington

	Location ID	T115-CB-313	T115-CB-322	T115-CB-323	T115-CB-323	T115-CB-324	T115-CB-328
	Sample Date	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14	16-Jan-14
	Sample Type	N	N	N	FD	N	N
	Depth	0 ft	0 ft	0 ft	0 ft	0 ft	0 ft
	Sample ID	T115N_S_CB-313_01162014	T115N_S_CB-322_01162014	T115N_S_CB-323_01162014	T115N_S_CB-323DUP_01162014	T115N_S_CB-324_01162014	T115N_S_CB-328_01162014
Analyte	**Unit**						
Vinyl chloride	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
Dichlorodifluoromethane (Freon 12)	µg/kg	*< 2.6*	*< 1.8*	*< 2.1*	*< 1.8*	*< 3*	*< 1.3*
TPH (mg/kg)							
Gasoline Range Organics	mg/kg	*< 9.7 J*	*< 6.3 J*	*< 9.9*	*< 7.3 J*	*< 14 J*	*< 6.6*
Diesel Range Organics	mg/kg	**1,100 J**	*< 690*	*< 1,200*	*< 950*	*< 1,500*	*< 780*
Motor Oil Range Organics	mg/kg	**10,000**	**4,800**	**7,600**	**6,700**	**8,700**	**5,500**

Notes:
< = Compound not detected at concentrationsabove the laboratory reporting detection limit.The laboratory reporting detection limit is shown.
Empty cells = Not analyzed
pg/g = picogram per gram
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
ft = feet

Qualifiers:
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

PUBLIC REVIEW DRAFT
Table FF-3
Stormwater Solids Analytical Comparison
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units		Abandoned Historical Pipe						SPU Right of Way Catch Basins						Terminal 115 Catch Basins					
			Location	SWP-01		SWP-02		SWP-02		RCB53		RCB54		RCB55		T115-CB-313		T115-CB-322		T115-CB-323	
			Date	8/1/2014		8/6/2014		8/6/2014		3/26/2006		3/26/2006		3/26/2006		1/16/2014		1/16/2014		1/16/2014	
			Sample ID	SWP-01-080414		SWP-02-080614		SUP-080614-1		RCB53-032606		RCB54-032606		RCB55-032606		T115N_S_CB-313_01162014		T115N_S_CB-322_01162014		T115N_S_CB-323_01162014	
			Screening Level [3]																		
Metals (mg/kg-DW)																					
Arsenic	EPA 200.8	mg/kg -DW	7	**1390**		**1900**		**1740**		**11**		**10**		**7**		**20**		**10**		**4.6**	
Copper	SW6010C	mg/kg -DW	390	**115**		**515**		**485**		**99**		**55.4**		**35.9**		**220**		**140**		**100**	
Zinc	SW6010C	mg/kg -DW	410	**564**		**262**		**262**		**635**		**260**		**77.8**		**2700**		**2300**		**910**	J
Total PCBs (ND = 0) [4]	SW8082	mg/kg	0.128	**0.058**		**0.027**		**0.033**		**0.058**		**0.02**		0.02	U	**0.13**		**0**		**0**	
Dioxin Furan Calculated TEQ (ND=1/2 DL)	Calculated	pg/g -DW	2	**301**		**117.00**		**145.00**								**29**		**15**		**11**	

Notes:
Empty cells = Not analyzed.
ND=1/2DL = Non-detect values calculated as one-half the laboratory detection limit
[1] = Toxicity Equivalency Quotient calculations for cPAHs were calculated in accordance with WAC 173-340-200 and WAC 173-340-900, Table 708-2 using benzo(a)pyrene as the reference chemical. If all compounds non-detect, then detection limit equal to maximum detection limit (modified by chemical's toxicity factor).
[2] = Screening levels established in Ecology Lower Duwamish Waterway Workbook (April 2019).
[3] = Toxicity Equivalency Quotient calculations for D/F TEQ were calculated in accordance with WAC 173-340-900, Table 708-1 using 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) as the reference chemical. Only positively identified compounds are included in TEQ calculation. Non-detected compounds are equal to one-half the detection limit.
[4] = Total PCBs are calculated where non-detected PCBs are equal to zero.
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.

Key:
mg/kg DW = milligrams per kilogram dry weight, equivalent to parts per million
pg/g DW = picograms per gram dry weight
RCB = right-of-way catch basin
SPU = Seattle Public Utilities
TEQ = toxicity equivalency quotient

Laboratory Data Qualifiers:
J = The detected results are qualified as estimated in accordance with NFGs.
U = Result is ≤ the method detection limit or qualified as non-detect in accordance with NFGs.

APPENDIX GG SEDIMENT ANALYTICAL SUMMARY CONTAMINANTS OF POTENTIAL CONCERN TABLES

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples					On-Site Samples			
				SED-01				SED-02				
				SED-SS-01	SED-SC-01	SED-SC-01	SED-SC-01	SED-SS-02	SED-SC-02	SED-SC-02	SED-SC-02	SED-SS-03
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012
				SED-SS-01-052212	SED-SC-01-0-1-053012	SED-SC-01-2-4-053012	DUP-053012-4	SED-SS-02-052312	SED-SC-02-0-1-052912	SED-SC-02-2-4-052912	SED-SC-02-6-8-052912	SED-SS-03-052212
				0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021		**0.011**	**0.0047**	**0.0088**		**0.095** J	**0.0045**	0.0017 U	
Tributyltin ion (pore water)	Krone1989	µg/L	--	**0.003** j				**0.004** j				**0.006**
Arsenic	SW6020A	mg/kg dw	7	**13.9**	**22.9** J-	**23.1** J-	**39.4** J-	**21.3**	**20.8** J	**4.3**	**25.8**	**41**
Cadmium	SW6020A	mg/kg dw	5.1	**0.3**	**0.2**	**0.2**	**0.2**	**0.5**	1 U	0.1 U	0.2 U	**0.3**
Chromium	SW6010C	mg/kg dw	260	**46.8**	**45**	**41.4**	**36**	**42**	**43**	**31.6**	**41.4**	**47**
Copper	SW6010C	mg/kg dw	390	**63.7**	**127**	**76.3**	**70.5**	**103**	**159** J	**21.9**	**55.9**	**164**
Lead	SW6020A	mg/kg dw	450	**28.1**	**54**	**24.2**	**42**	**56.8**	**258**	**48.6**	**258**	**73.5**
Mercury	SW7471A	mg/kg dw	0.41	**0.1**	**0.4** J+	**0.04** J+	**0.04** J+	**0.19** J-	**0.19** J	**0.07**	**0.24**	**0.22**
Silver	SW6010C	mg/kg dw	6.1	0.6 U	0.5 U	0.4 U	0.4 U	0.7 U	0.6 U	0.4 U	**0.6**	0.7 U
Zinc	SW6010C	mg/kg dw	410	**188**	**192**	**131**	**145**	**192**	**368** J-	**52** J-	**152** J-	**254**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples								
				SED-03					SED-04			
				SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SS-04	SED-SC-04	SED-SC-04	SED-SC-04
				5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012
				SED-SC-03-0-1-053012	SED-SC-03-2-4-053012	DUP-053012-3	SED-SC-03-4-6-053012	SED-SC-03-6-8-053012	SED-SS-04-052212	SED-SC-04-0-1-053012	SED-SC-04-2-4-053012	SED-SC-04-6-7.1-053012
				0 - 1 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 7.1 ft
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021	0.0017 U	0.0016 U	0.0016 U		0.0015 U		**0.062**	**0.0041**	0.0015 U
Tributyltin ion (pore water)	Krone1989	µg/L	--						**0.003** j			
Arsenic	SW6020A	mg/kg dw	7	**10.9** J-	**44.8** J-	**97.5** J-	**14.1** J-	**13.3** J-	**45.9**	**43.3**	**18.2**	**4.6**
Cadmium	SW6020A	mg/kg dw	5.1	1 U	**0.6**	**1.7**	**0.1** J-	0.1 U	**0.3**	**0.5**	**0.2**	0.1 U
Chromium	SW6010C	mg/kg dw	260	**88**	**49.1**	**54**	**22.1** J-	**11.9**	**37**	**32**	**18.1**	**10.5**
Copper	SW6010C	mg/kg dw	390	**354**	**101**	**102**	**30.1** J-	**10.4**	**147**	**114** J+	**33.9** J+	**9.7** J+
Lead	SW6020A	mg/kg dw	450	**1070**	**56.4**	**53.1**	**20.6** J-	**2.5**	**52.7**	**79.3**	**11.2**	**1.6**
Mercury	SW7471A	mg/kg dw	0.41	**0.3** J+	**0.26** J+	**0.25** J+	**0.08** J-	0.02 U	**0.19**	**0.22**	**0.07**	0.03 U
Silver	SW6010C	mg/kg dw	6.1	**3.3**	**0.7**	**0.7**	0.4 UJ	0.4 U	0.6 U	**0.6**	0.4 U	0.4 U
Zinc	SW6010C	mg/kg dw	410	**383**	**122**	**122**	**50** J-	**29**	**262**	**278** J	**68**	**26**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples			On-Site Samples					
				SED-05					SED-06			
				SED-SS-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SS-06	SED-SS-06	SED-SC-06	SED-SC-06
				5/23/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/23/2012	5/23/2012	5/29/2012	5/29/2012
				SED-SS-05-052312	SED-SC-05-0-1-060112	SED-SC-05-2-4-060112	SED-SC-05-4-6-060112	SED-SC-05-6-8-060112	SED-SS-06-052312	DUP-052312-1	SED-SC-06-0-1-052912	SED-SC-06-2-4-052912
				0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021		**0.028**	**0.51**		**0.0021** j			**0.15**	**0.039**
Tributyltin ion (pore water)	Krone1989	µg/L	--	**0.01**					**0.005**	**0.003** j		
Arsenic	SW6020A	mg/kg dw	7	**36.6**	**18.3**	**133**	**23.6** J-	**4.7**	**15.3**	**14.6**	**20.2** J-	**10** J-
Cadmium	SW6020A	mg/kg dw	5.1	**0.4**	**0.4**	**0.8**	**0.1** J-	0.1 U	**0.4**	**0.4**	**0.4**	**0.9**
Chromium	SW6010C	mg/kg dw	260	**39**	**40.5**	**41.5**	**16.2** J-	**9.5**	**38**	**40**	**39**	**53**
Copper	SW6010C	mg/kg dw	390	**94.3**	**105**	**238**	**57.6** J-	**12.5**	**77.7**	**81.7**	**121**	**85.3**
Lead	SW6020A	mg/kg dw	450	**39.8**	**42.9**	**196**	**28** J-	**1.7**	**35.7**	**35**	**70.3**	**324**
Mercury	SW7471A	mg/kg dw	0.41	**0.42** J-	**0.16**	**0.31**	**0.06** J-	0.03 U	**0.17** J-	**0.19** J-	**0.22**	**0.37** J
Silver	SW6010C	mg/kg dw	6.1	0.6 U	0.6 U	**0.6**	0.4 UJ	0.4 U	0.7 U	0.7 U	0.6 U	**1.2**
Zinc	SW6010C	mg/kg dw	410	**187**	**169**	**611**	**151** J-	**19**	**149**	**155**	**240**	**236**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples				On-Site Samples				
					SED-07				SED-08			
				SED-SC-06	SED-SS-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SS-08	SED-SS-08	SED-SC-08	SED-SC-08
				5/29/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/22/2012	5/30/2012	5/30/2012
				SED-SC-06-6-8-052912	SED-SS-07-052212	SED-SC-07-0-1-053012	SED-SC-07-2-4-053012	SED-SC-07-6-8-053012	SED-SS-08-052212	DUP-052212-1	SED-SC-08-0-1-053012	SED-SC-08-2-4-053012
				6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021	**0.0052**		**0.14**	**0.007** J	0.0017 U			**0.1**	**0.13**
Tributyltin ion (pore water)	Krone1989	µg/L	--		0.002 U				**0.006**	**0.007**		
Arsenic	SW6020A	mg/kg dw	7	**13.2** J-	**16.3**	**27.8**	**16.5**	**10.9**	**14**	**15**	**18.7** J-	**18** J-
Cadmium	SW6020A	mg/kg dw	5.1	**0.9**	**0.4** J	**0.5**	**1.1**	**0.5**	**0.3**	**0.3**	**0.4**	**0.7**
Chromium	SW6010C	mg/kg dw	260	**45.1**	**37**	**40**	**45.8**	**32.7**	**34**	**37**	**43**	**53.6**
Copper	SW6010C	mg/kg dw	390	**60.9**	**74**	**118** J+	**67.5** J+	**47.8** J+	**67.9**	**73.2**	**99.5**	**86.5**
Lead	SW6020A	mg/kg dw	450	**30.7**	**28.7**	**63.2**	**38.3**	**21.9**	**25.6**	**28.9**	**52.1**	**71.6**
Mercury	SW7471A	mg/kg dw	0.41	**0.3**	**0.23**	**0.19**	**0.31**	**0.18**	**0.21**	**0.17**	**0.24** J+	**0.27** J+
Silver	SW6010C	mg/kg dw	6.1	**0.5**	0.7 U	0.6 U	**0.9**	0.4 U	0.6 U	0.7 U	0.6 U	**0.7**
Zinc	SW6010C	mg/kg dw	410	**111**	**146**	**220**	**127**	**79**	**137**	**144**	**187**	**153**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples						On-Site Samples		
						SED-09				SED-13		
				SED-SC-08	SED-SC-08	SED-SS-09	SED-SC-09	SED-SC-09	SED-SC-09	SED-SS-13	SED-SC-13	SED-SC-13
				5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/23/2012	5/31/2012	5/31/2012
				DUP-053012-2	SED-SC-08-6-8-053012	SED-SS-09-052312	SED-SC-09-0-1-052912	SED-SC-09-2-4-052912	SED-SC-09-6-8-052912	SED-SS-13-052312	SED-SC-13-0-1-053112	SED-SC-13-2-4-053112
				2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021	**0.16**	**0.0035**		0.0017 U	0.0016 U	0.0016 U		**0.13**	0.0016 U
Tributyltin ion (pore water)	Krone1989	µg/L	--			**0.003** j				**0.005**		
Arsenic	SW6020A	mg/kg dw	7	**20.9** J-	**5.2** J-	**22.9**	**18.5**	**18.9**	**12.3**	**15**	**19.1** J-	**7.9** J-
Cadmium	SW6020A	mg/kg dw	5.1	**0.8**	**0.3**	**0.4**	**1.2**	**1.1**	**0.7**	**0.4**	0.2 U	**0.5**
Chromium	SW6010C	mg/kg dw	260	**51.5**	**18.7**	**42**	**48**	**43.8**	**37**	**37**	**44**	**40.6**
Copper	SW6010C	mg/kg dw	390	**98.6**	**23.1**	**124**	**69.5** J+	**65.2** J+	**62.2** J+	**81**	**121**	**47.5**
Lead	SW6020A	mg/kg dw	450	**88.4**	**15.4**	**68.7**	**40.8**	**35.9**	**26**	**36.9**	**80.2**	**241**
Mercury	SW7471A	mg/kg dw	0.41	**0.34** J+	**0.08** J+	**0.26** J-	**0.36**	**0.29**	**0.14**	**0.21** J-	**0.2** J+	**0.19** J+
Silver	SW6010C	mg/kg dw	6.1	**0.9**	0.3 U	0.6 U	**1**	**0.7**	0.4 U	0.6 U	0.6 U	**0.6**
Zinc	SW6010C	mg/kg dw	410	**194**	**51**	**326**	**127**	**124**	**77**	**158**	**240**	**159**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples						On-Site Samples		
					SED-14			SED-14		SED-15		
				SED-SC-13	SED-SS-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SS-15	SED-SC-15	SED-SC-15
				5/31/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/31/2012	5/31/2012
				SED-SC-13-6-7-053112	SED-SS-14-052312	SED-SC-14-0-1-052912	SED-SC-14-2-4-052912	SED-SC-14-6-8-052912	DUP-052912-2	SED-SS-15-052212	SED-SC-15-0-1-053112	SED-SC-15-2-4-053112
				6 - 7 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021	0.0016 U		**0.013**	**0.0035**	0.0016 U	0.0016 U		**0.016**	**0.0048**
Tributyltin ion (pore water)	Krone1989	µg/L	--		**0.011**					0.002 U		
Arsenic	SW6020A	mg/kg dw	7	**4.3** J-	**269**	**29.9** J-	**18.7** J-	**4.9** J-	**4.8** J-	**32.7**	**29.3** J+	**60.6** J+
Cadmium	SW6020A	mg/kg dw	5.1	**0.1**	**0.7**	**0.7**	**0.3**	0.1 U	0.1 U	0.2 U	**0.3**	**0.4**
Chromium	SW6010C	mg/kg dw	260	**14.2**	**38**	**48.5**	**25.9**	**10.5**	**12.7**	**34.8**	**35.5**	**34**
Copper	SW6010C	mg/kg dw	390	**17.6**	**405**	**377**	**90.3**	**11.3**	**10.9**	**120**	**181** J+	**141** J+
Lead	SW6020A	mg/kg dw	450	**4**	**538**	**97.7**	**26.3**	**2.9**	**2.8**	**50.9**	**114** J+	**49.5** J+
Mercury	SW7471A	mg/kg dw	0.41	**0.03** J+	**0.07** J-	**0.41**	**0.15**	0.02 U	0.03 U	**0.1**	**0.14**	**0.16**
Silver	SW6010C	mg/kg dw	6.1	0.4 U	1 U	**1.6**	0.4 U	0.4 U	0.4 U	0.6 U	**1.4**	1 U
Zinc	SW6010C	mg/kg dw	410	**34**	**1680**	**214**	**150**	**30**	**29**	**313**	**149** J+	**133** J+

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples								
				SED-16				SED-17			SED-18	SED-19
				SED-SS-16	SED-SC-16	SED-SC-16	SED-SC-16	SED-SS-17	SED-SC-17	SED-SC-17	SED-SS-18	SED-SS-19
				5/22/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012	5/30/2012	5/30/2012	5/23/2012	5/23/2012
				SED-SS-16-052212	SED-SC-16-0-1-053112	SED-SC-16-2-3.5-053112	DUP-053112-2	SED-SS-17-052312	SED-SC-17-0-1-053012	SED-SC-17-2-4-053012	SED-SS-18-052312	SED-SS-19-052312
				0 - 10 cm	0 - 1 ft	2 - 3.5 ft	2 - 3.5 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	0 - 10 cm	0 - 10 cm
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021		**0.12**	**0.0058**	**0.0065**		**0.2**	**0.0066**		
Tributyltin ion (pore water)	Krone1989	µg/L	--	**0.003** j				**0.006**			**0.013**	**0.004** j
Arsenic	SW6020A	mg/kg dw	7	**57.3**	**207** J+	**119** J+	**134** J+	**23**	**26.6** J-	**1.4** J-	**18.9**	**18.1**
Cadmium	SW6020A	mg/kg dw	5.1	**0.3**	**0.3**	**0.4**	**0.3**	**0.4** J	**1**	0.8 U	**0.4**	**0.4**
Chromium	SW6010C	mg/kg dw	260	**32.7**	**34.3**	**26.1**	**26.2**	**43**	**51**	**43.6**	**36**	**43**
Copper	SW6010C	mg/kg dw	390	**116**	**159** J+	**100** J+	**75.9** J+	**114**	**188**	**101**	**74.8**	**99**
Lead	SW6020A	mg/kg dw	450	**65.6**	**82.3** J+	**20.8** J+	**16.9** J+	**66.9** J	**185**	**461**	**30.4**	**43.6**
Mercury	SW7471A	mg/kg dw	0.41	**0.17**	**0.16**	**0.08**	**0.1**	**0.5** J-	**0.3** J+	**0.09** J+	**0.33** J-	**0.18** J-
Silver	SW6010C	mg/kg dw	6.1	0.5 U	**0.6**	0.4 U	**0.9**	0.6 U	**0.7**	0.5 U	0.7 U	0.6 U
Zinc	SW6010C	mg/kg dw	410	**178**	**214** J+	**76** J+	**70** J+	**197**	**399**	**303**	**143**	**189**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples			On-Site Samples						
				SED-22	LDW Samples								
				SED-SS-22	B4a	DR122	DR123	DR124	LDW-SC29	LDW-SC29	LDW-SC29	LDW-SS56
				5/23/2012	8/15/2004	3/14/2005	3/14/2005	3/14/2005	2/21/2006	2/21/2006	2/21/2006	1/24/2005
				SED-SS-22-052312	LDW-B4a-S	SD-DR122-0000	SD-DR123-0000	SD-DR124-0000	LDW-SC29-0-1	LDW-SC29-1-2	LDW-SC29-2-3_6	LDW-SS56-010
				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0-1 ft	1-2 ft	2-3.6 ft	0 - 10 cm
Metals - Dry Weight												
Tributyltin ion	Krone1989	mg/kg dw	0.0021		**0.032**		**0.22**					**0.096**
Tributyltin ion (pore water)	Krone1989	µg/L	--	0.002 U								
Arsenic	SW6020A	mg/kg dw	7	**50.9**	**46.5** J	**16.8**		**31.8**	**14**	**11**	6 U	**161**
Cadmium	SW6020A	mg/kg dw	5.1	**0.2**	**0.323**	**0.3**		**0.65**	0.3 U	0.2 U	0.2 U	**0.6**
Chromium	SW6010C	mg/kg dw	260	**33.7**	**31.9**	**38**		**39**	**20.8**	**14.5**	**10.6**	**41.2**
Copper	SW6010C	mg/kg dw	390	**156**	**189**	**100**		**119**	**51.1**	**20.5**	**11.3**	**365**
Lead	SW6020A	mg/kg dw	450	**50.4**	**67.8** J	**46.7** J		**83.2**	**18**	**6**	**4**	**160**
Mercury	SW7471A	mg/kg dw	0.41	**0.17** J-	**0.115**	**0.2**		0.05 U	**0.12**	0.05 U	0.06 U	**0.14**
Silver	SW6010C	mg/kg dw	6.1	0.6 U	**0.545**	**0.31**		**0.35** J	0.4 U	0.4 U	0.4 U	**0.9**
Zinc	SW6010C	mg/kg dw	410	**212**	**291**	**164**		**282**	**77.9**	**38.4**	**31.2**	**607**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples				Off-Site Samples			
								SED-10	SED-11		SED-12
				LDW-SS57	LDW-SS58	LDW-SS59	LDW-SSB4a	SED-SS-10	SED-SS-11	SED-SS-11	SED-SS-12
				1/24/2005	1/24/2005	3/14/2005	3/14/2005	5/24/2012	5/25/2012	5/25/2012	5/24/2012
				LDW-SS57-010	LDW-SS58-010	LDW-SS59R2-010	LDW-SSB4a-010	SED-SS-10-052412	SED-SS-11-052512	DUP-052512-1	SED-SS-12-052412
				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Metals - Dry Weight											
Tributyltin ion	Krone1989	mg/kg dw	0.0021		**0.028**						
Tributyltin ion (pore water)	Krone1989	µg/L	--					**0.008**	**0.011**	**0.004** j	**0.004** j
Arsenic	SW6020A	mg/kg dw	7	**35.4**	**33.9**	**20.7**	**38.1**	**16.3**	**14.1**	**15.3**	**14.7**
Cadmium	SW6020A	mg/kg dw	5.1	**0.7**	**1**	**0.5**	**0.3**	**0.3**	**0.3**	**0.3**	**0.4**
Chromium	SW6010C	mg/kg dw	260	**43**	**45**	**43.5**	**34.3**	**35**	**34**	**34**	**34**
Copper	SW6010C	mg/kg dw	390	**179**	**146**	**102** J	**226** J	**66.4**	**67.7**	**66.6**	**61.7**
Lead	SW6020A	mg/kg dw	450	**138**	**287**	**60**	**75**	**26**	**24.9**	**26.7**	**25.3**
Mercury	SW7471A	mg/kg dw	0.41	**0.31**	**0.29**	**0.19**	**0.23**	**0.16** J+	**0.17**	**0.26**	**0.21** J+
Silver	SW6010C	mg/kg dw	6.1	**0.9**	**1.1**	0.6 U	**0.9**	0.7 U	0.7 U	0.7 U	0.7 U
Zinc	SW6010C	mg/kg dw	410	**262**	**281**	**219** J	**214** J	**127**	**129**	**126**	**119**

PUBLIC REVIEW DRAFT
Table GG-1
Sediment Analytical Results Summary - Metals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Off-Site Samples						
				SED-18		SED-20		SED-21		
				SED-SC-18	SED-SC-18	SED-SC-20	SED-SC-20	SED-SC-21	SED-SC-21	SED-SC-21
				6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/25/2012	5/25/2012	5/25/2012
				SED-SC-18-0-1-060112	SED-SC-18-2-2.25-060112	SED-SC-20-0-1-060112	SED-SC-20-2-2.5-060112	SED-SC-21-0-1-052512	SED-SC-21-2-4-052512	SED-SC-21-6-8-052512
				0 - 1 ft	2 - 2.25 ft	0 - 1 ft	2 - 2.5 ft	0 - 1 ft	2 - 4 ft	6 - 8 ft
Metals - Dry Weight										
Tributyltin ion	Krone1989	mg/kg dw	0.0021	**0.018**	**0.034**	**0.22**	**0.06**	**0.012**	**0.048**	**0.24**
Tributyltin ion (pore water)	Krone1989	µg/L	--							
Arsenic	SW6020A	mg/kg dw	7	**16.7**	**18.5**	**23.8**	**18.1**	**13.3**	**1.28**	**20.5**
Cadmium	SW6020A	mg/kg dw	5.1	**0.6**	**0.6**	**0.7**	**0.5**	**0.3**	**0.03**	**0.5**
Chromium	SW6010C	mg/kg dw	260	**34**	**35.2**	**26.3** J	**14.4**	**33**	**35**	**29.5**
Copper	SW6010C	mg/kg dw	390	**69.5**	**87.1**	**66.3** J	**38.8**	**59.3**	**61.6**	**100**
Lead	SW6020A	mg/kg dw	450	**31.5**	**39.2**	**81**	**48.1**	**22**	**2.49**	**55.9**
Mercury	SW7471A	mg/kg dw	0.41	**0.19**	**0.2**	**0.24**	**0.23**	**0.14**	**0.27**	**0.18**
Silver	SW6010C	mg/kg dw	6.1	0.7 U	0.6 U	0.5 U	0.5 U	0.8 U	0.6 U	0.6 U
Zinc	SW6010C	mg/kg dw	410	**128**	**150**	**125** J	**70**	**114**	**116**	**157**

PUBLIC REVIEW DRAFT

Table GG-1

Sediment Analytical Results Summary - Metals

5900 West Marginal Way Site

Seattle, Washington

Notes:
-- = No value available
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
All depths below mudline.

Key:
cm = centimeters
DUP = duplicate field sample
dw = dry weight
ft = feet
LDW = Lower Duwamish Waterway
mg/kg = milligrams per kilogram
NA = not available, no screening value calculated
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample
µg/L = micrograms per liter

Data Qualifiers:
- = Compound concentration biased low
+ = Compound concentration biased high
J = Detected compound qualified as estimated
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.
UJ = Non-detected compound qualified as estimated

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples								
					SED-01				SED-02			SED-02	
					SED-SS-01	SED-SC-01	SED-SC-01	SED-SC-01	SED-SS-02	SED-SC-02	SED-SC-02	SED-SC-02	SED-SS-03
					5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012
					SED-SS-01-052212	SED-SC-01-0-1-053012	SED-SC-01-2-4-053012	DUP-053012-4	SED-SS-02-052312	SED-SC-02-0-1-052912	SED-SC-02-2-4-052912	SED-SC-02-6-8-052912	SED-SS-03-052212
					0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.0032 U	**0.01** j	0.003 U	0.0029 U	**0.015** j	**0.031**	0.003 U	**0.024**	0.0031 U
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	0.0056 U	0.0052 U	0.0052 U	0.0051 U	**0.0097** j	0.0055 U	0.0053 U	0.0054 U	0.0055 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.065**	**0.039**	**0.014** j	**0.011** j	**0.04**	**0.032**	0.0042 U	**0.045**	**0.063**
Fluorene	SW8270D	mg/kg dw	0.54	--	0.0043 U	**0.016** j	0.004 U	0.0039 U	**0.018** j	**0.019**	0.004 U	**0.03**	0.0042 U
Naphthalene	SW8270D	mg/kg dw	2.10	--	0.0027 U	**0.015** j	0.0025 U	0.0025 U	**0.039**	**0.023**	0.0026 U	**0.036**	**0.07**
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.22**	**0.14**	**0.044**	**0.038**	**0.16**	**0.16**	**0.025**	**0.094**	**0.13**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.18**	**0.12**	**0.044**	**0.047**	**0.15**	**0.14**	**0.015** j	**0.072**	**0.14**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.21**	**0.15**	**0.06**	**0.065**	**0.17**	**0.18**	**0.017** j	**0.057**	**0.14**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.19**	**0.14**	**0.056**	**0.068**	**0.13**	**0.14**	**0.012** j	**0.042**	**0.11**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.32**	**0.22**	**0.068**	**0.08**	**0.24**	**0.22**	**0.02**	**0.097**	**0.26**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.061**	**0.02**	**0.021**	**0.021**	**0.059**	**0.035**	**0.0032** j	**0.01**	**0.031**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.4**	**0.25**	**0.091**	**0.095**	**0.31**	**0.29**	**0.031**	**0.23**	**0.35**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.16**	**0.11**	**0.047**	**0.057**	**0.11**	**0.12**	0.0043 U	**0.032**	**0.095**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.36**	**0.22**	**0.095**	**0.1**	**0.32**	**0.36**	**0.044**	**0.31**	**0.29**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.54**	**0.36**	**0.14**	**0.19**	**0.39**	**0.42**	**0.035**	**0.13**	**0.36**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.003 U	0.0028 U	0.0028 U	0.0027 U	**0.012** j	**0.012** j	0.0028 U	**0.019**	0.0029 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**1.471**	**0.98**	**0.38**	**0.46**	**1.119**	**1.115**	**0.0902**	**0.398**	**1.026**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.33**	**0.22**	**0.092**	**0.10**	**0.26**	**0.26**	**0.023**	**0.085**	**0.21**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.33**	**0.22**	**0.092**	**0.10**	**0.26**	**0.26**	**0.024**	**0.085**	**0.21**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	0.13 U	**0.47** j	0.34 U	0.27 U	**0.58** j	**1.3**	0.48 U	**1.3**	0.11 U
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	0.23 U	0.25 U	0.58 U	0.48 U	**0.37** j	0.23 U	0.85 U	0.28 U	0.19 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**2.7**	**1.8**	**1.6** j	**1.0** j	**1.5**	**1.3**	0.68 U	**2.4**	**2.2**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	0.18 U	**0.75** j	0.45 U	0.37 U	**0.69** j	**0.79**	0.64 U	**1.6**	0.14 U
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	0.11 U	**0.71** j	0.28 U	0.24 U	**1.5**	**0.96**	0.42 U	**1.9**	**2.4**
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**9.0**	**6.6**	**4.9**	**3.6**	**6.2**	**6.7**	**4.0**	**4.9**	**4.4**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**7.4**	**5.7**	**4.9**	**4.4**	**5.8**	**5.8**	**2.4** j	**3.8**	**4.8**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**8.6**	**7.1**	**6.7**	**6.1**	**6.5**	**7.5**	**2.7** j	**3.0**	**4.8**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**7.8**	**6.6**	**6.3**	**6.4**	**5.0**	**5.8**	**1.9** j	**2.2**	**3.8**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**13**	**10**	**7.6**	**7.5**	**9.2**	**9.2**	**3.2**	**5.1**	**8.9**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**2.5**	**0.94**	**2.4**	**2.0**	**2.3**	**1.5**	**0.52** j	**0.52**	**1.1**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**16**	**12**	**10**	**9.0**	**12**	**12**	**5.0**	**12**	**12**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**6.6**	**5.2**	**5.3**	**5.4**	**4.2**	**5.0**	0.69 U	**1.7**	**3.2**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**15**	**10**	**11**	**9.4**	**12**	**15**	**7.1**	**16**	**9.9**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**22**	**17**	**16**	**18**	**15**	**18**	**5.6**	**6.8**	**12**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	0.12 U	0.13 U	0.31 U	0.25 U	**0.46** j	**0.50** j	0.45 U	**0.99**	0.099 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**12**	**10**	**6.5**	**4.6**	**11**	**11**	**4.0**	**12**	**9.0**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**99**	**75**	**70**	**68**	**72**	**79**	**29**	**51**	**61**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0018 U	0.0017 U	0.0017 U	0.0017 U	0.0018 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.0011 U	0.001 U	0.001 U	0.00098 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.0011 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	0.0012 U	0.0011 U	0.0011 U	0.0011 U	**0.0027** j	**0.0031** j	0.0011 U	**0.0058**	**0.0029** j
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	**0.0032** j	0.0026 U	0.0026 U	0.0026 U	0.0028 U	0.0028 U	0.0027 U	**0.0051** j	**0.0052** j
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.18** j	0.092 U	0.093 U	0.09 U	**0.19** j	0.097 U	0.094 U	0.095 U	**0.22** j
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.12**	**0.056**	**0.0085** j	**0.011** j	**0.094**	**0.024**	0.0065 U	**0.017** j	**0.063**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	0.004 U	**0.01** j	0.0038 U	0.0037 U	**0.013** j	**0.012** j	0.0038 U	**0.019**	0.0039 U
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U	0.0012 U	0.0012 U	0.0011 U	0.0012 U	**0.0026** j	0.0012 U	0.0012 U	**0.0057**
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00094 U	0.00088 U	0.00088 U	0.00086 U	0.00093 U	0.00092 U	0.00089 U	0.00091 U	0.00092 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	**0.0041** j	**0.0072** j	0.0013 U	0.0012 U	**0.0025** j	**0.0051** j	0.0013 U	**0.0075** j	**0.003** j
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	**0.0035** j	0.0017 U	0.0017 U	0.0016 U	**0.0031** j	**0.0031** j	0.0017 U	0.0017 U	**0.004** j
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	0.0065 U	**0.018** j	0.0061 U	0.0059 U	**0.025** j	**0.045**	0.0062 U	**0.14**	0.0063 U
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	0.014 U	0.013 U	0.013 U	0.013 U	**0.11**	**0.27**	**0.053**	**0.023** j	**0.29**
Phenol	SW8270D	mg/kg dw	0.42	--	**0.22**	**0.18**	**0.0092** j	**0.012** j	**0.096**	**0.14**	**0.023**	0.0082 U	**0.12**
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.074 U	0.080 U	0.19 U	0.16 U	0.069 U	0.075 U	0.27 U	0.094 U	0.061 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.045 U	0.047 U	0.11 U	0.092 U	0.042 U	0.046 U	0.16 U	0.052 U	0.038 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.049 U	0.052 U	0.12 U	0.10 U	**0.10** j	**0.13** j	0.18 U	**0.30**	**0.099** j
Dibenzofuran	SW8270D	mg/kg-OC	--	--	0.16 U	**0.47** j	0.43 U	0.35 U	**0.50** j	**0.50** j	0.61 U	**0.99**	0.13 U
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.049 U	0.057 U	0.13 U	0.10 U	0.046 U	**0.11** j	0.19 U	0.063 U	**0.19**
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.039 U	0.042 U	0.099 U	0.081 U	0.036 U	0.038 U	0.14 U	0.048 U	0.031 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	**0.17** j	**0.34** j	0.15 U	0.11 U	**0.096** j	**0.21** j	0.21 U	**0.39** j	**0.10** j

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples					On-Site Samples			
					SED-03					SED-04			
					SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SS-04	SED-SC-04	SED-SC-04	SED-SC-04
					5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012
					SED-SC-03-0-1-053012	SED-SC-03-2-4-053012	DUP-053012-3	SED-SC-03-4-6-053012	SED-SC-03-6-8-053012	SED-SS-04-052212	SED-SC-04-0-1-053012	SED-SC-04-2-4-053012	SED-SC-04-4-6-053012
					0 - 1 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	**0.014** j	**0.027**	**0.016** j		0.0031 U	**0.018** j	0.0031 U	0.0031 U	0.0012 U
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	**0.031**	**0.041**	**0.028**		0.0054 U	**0.023**	**0.0094** j	0.0054 U	0.0012 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.032**	**0.04**	**0.027**		0.0042 U	**0.036**	**0.023**	0.0042 U	0.0014 U
Fluorene	SW8270D	mg/kg dw	0.54	--	**0.034**	**0.039**	**0.025**		0.0041 U	**0.025**	**0.015** j	0.0041 U	0.0012 U
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.098**	**0.17**	**0.097**		0.0026 U	**0.053**	**0.02**	0.0026 U	0.0025 U
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.11**	**0.13**	**0.08**		0.0034 U	**0.14**	**0.047**	0.0034 U	**0.0031** j
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.059**	**0.053**	**0.036**		0.0031 U	**0.13**	**0.048**	0.0031 U	**0.0058** J
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.074**	**0.047**	**0.033**		0.0051 U	**0.15**	**0.034**	0.0051 U	**0.0056**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.048**	**0.036**	**0.027**		0.0042 U	**0.1**	**0.022**	0.0041 U	0.0029 U
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.089**	**0.066**	**0.047**		0.0035 U	**0.2**	**0.047**	0.0035 U	**0.0069**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.02**	**0.0072**	**0.009**		0.0019 U	**0.025**	**0.0026** j	0.0019 U	0.0022 U
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.14**	**0.17**	**0.11**		0.0027 U	**0.24**	**0.17**	0.0027 U	**0.0084**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.04**	**0.025**	**0.02**		0.0044 U	**0.086**	**0.018** j	0.0044 U	0.0033 U
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.19**	**0.22**	**0.15**		0.0018 U	**0.27**	**0.2**	0.0018 U	**0.016** J
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.12**	**0.098**	**0.074**		0.0026 U	**0.28**	**0.07**	0.0026 U	**0.007**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	**0.045**	**0.052**	**0.028**		0.0029 U	**0.024**	**0.0094** j	0.0029 U	0.0014 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.402**	**0.2962**	**0.219**		**0**	**0.871**	**0.2196**	**0**	**0.0253**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.10**	**0.068**	**0.05**		**0**	**0.21**	**0.049**	**0**	**0.0069**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.10**	**0.068**	**0.05**		**0.0035**	**0.21**	**0.049**	**0.0035**	**0.0076**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	**0.42** j	**1.8**	**0.73** j		0.86 U	**0.81** j	0.17 U	0.23 U	0.22 U
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	**0.94**	**2.7**	**1.3**		1.5 U	**1.0**	**0.52** j	0.40 U	0.22 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**0.97**	**2.6**	**1.2**		1.2 U	**1.6**	**1.3**	0.31 U	0.25 U
Fluorene [3]	SW8270D	mg/kg-OC	23	--	**1.0**	**2.5**	**1.1**		1.1 U	**1.1**	**0.82** j	0.30 U	0.22 U
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**3.0**	**11**	**4.4**		0.72 U	**2.4**	**1.1**	0.19 U	0.45 U
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**3.3**	**8.5**	**3.6**		0.94 U	**6.3**	**2.6**	0.25 U	**0.56** j
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**1.8**	**3.5**	**1.6**		0.86 U	**5.9**	**2.6**	0.23 U	**1.1** J
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**2.2**	**3.1**	**1.5**		1.4 U	**6.8**	**1.9**	0.38 U	**1.0**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**1.5**	**2.4**	**1.2**		1.2 U	**4.5**	**1.2**	0.30 U	0.53 U
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**2.7**	**4.3**	**2.1**		0.97 U	**9.0**	**2.6**	0.26 U	**1.3**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**0.60**	**0.47**	**0.41**		0.52 U	**1.1**	**0.14** j	0.14 U	0.40 U
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**4.2**	**11**	**5.0**		0.75 U	**11**	**9.3**	0.20 U	**1.5**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**1.2**	**1.6**	**0.91**		1.2 U	**3.9**	**0.99** j	0.32 U	0.60 U
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**5.7**	**14**	**6.8**		0.50 U	**12**	**11**	0.13 U	**2.9** J
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**3.6**	**6.4**	**3.4**		0.72 U	**13**	**3.8**	0.19 U	**1.3**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	**1.4**	**3.4**	**1.3**		0.80 U	**1.1**	**0.52** j	0.21 U	0.25 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**10**	**29**	**12**		**0**	**13**	**6.3**	**0**	**0.6**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**24**	**47**	**23**		**0**	**67**	**33**	**0**	**9.0**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0018 U	0.0018 U	0.0018 U		0.0018 U	0.0018 U	0.0017 U	0.0017 U	
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.0011 U	**0.0027** j	0.0011 U		0.001 U	0.0011 U	0.001 U	0.001 U	
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	**0.0059**	**0.0067**	**0.0032** j		0.0011 U	0.0012 U	0.0011 U	0.0011 U	
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	**0.009** j	**0.01** j	**0.0066** j		0.0027 U	0.0028 U	0.0027 U	0.0027 U	
Benzoic acid	SW8270D	mg/kg dw	0.65	--	0.096 U	**0.14** j	0.096 U		0.095 U	**0.15** j	0.094 U	0.095 U	
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.014** j	**0.038**	**0.03**		0.0066 U	**0.072**	**0.0092** j	**0.0068** j	
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	**0.021**	**0.034**	**0.019**		0.0039 U	**0.016** j	0.0038 U	0.0038 U	0.0014 U
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	**4.8**	**0.011**	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00092 U	0.00094 U	0.00092 U		0.00091 U	0.00093 U	0.0009 U	0.0009 U	
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	**0.018** j	**0.0096** j	**0.0046** j		0.0013 U	0.0013 U	0.0013 U	0.0013 U	
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	**0.0088**	**0.011**	**0.0066**		0.0017 U	0.0018 U	0.0017 U	0.0017 U	
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	**0.15**	**0.11**	**0.064**		0.0063 U	**0.012** j	0.0062 U	0.0062 U	
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	**20**	**0.2**	**0.086**		0.014 U	**0.094**	0.013 U	0.013 U	
Phenol	SW8270D	mg/kg dw	0.42	--	**0.68**	**0.45**	**0.22**		0.0082 U	**0.065**	0.0081 U	0.0081 U	
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.054 U	0.12 U	0.082 U		0.50 U	0.081 U	0.093 U	0.13 U	
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.033 U	**0.18** j	0.050 U		0.28 U	0.050 U	0.055 U	0.074 U	
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.18**	**0.44**	**0.15** j		0.30 U	0.054 U	0.060 U	0.081 U	
Dibenzofuran	SW8270D	mg/kg-OC	--	--	**0.63**	**2.2**	**0.86**		1.1 U	**0.72** j	0.21 U	0.28 U	0.25 U
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**145**	**0.72**	0.055 U	0.07 U	0.33 U	0.054 U	0.066 U	0.088 U	
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.028 U	0.061 U	0.042 U		0.25 U	0.042 U	0.049 U	0.066 U	
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	**0.54** j	**0.63** j	**0.21** j		0.36 U	0.059 U	0.071 U	0.096 U	

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples								
					SED-05			SED-05			SED-06		
					SED-SC-04	SED-SS-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SS-06	SED-SS-06	SED-SC-06
					5/30/2012	5/23/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/23/2012	5/23/2012	5/29/2012
					SED-SC-04-6-7.1-053012	SED-SS-05-052312	SED-SC-05-0-1-060112	SED-SC-05-2-4-060112	SED-SC-05-4-6-060112	SED-SC-05-6-8-060112	SED-SS-06-052312	DUP-052312-1	SED-SC-06-0-1-052912
					6 - 7.1 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.0031 U	**0.035**	0.0032 U	**0.056**	**0.012**	0.0031 U	0.0032 U	0.0031 U	**0.027**
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	**0.042**	0.0055 U	0.0056 U	**0.064**	**0.0069** J	0.0053 U	0.0056 U	0.0055 U	0.0055 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.031**	**0.26**	**0.033**	**0.22**	**0.019**	0.0042 U	**0.018** j	**0.036**	**0.074**
Fluorene	SW8270D	mg/kg dw	0.54	--	**0.012** j	**0.076**	**0.011** j	**0.074**	**0.012**	0.0041 U	0.0042 U	**0.014** j	**0.027**
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.046**	**0.022**	**0.024**	**0.058**	**0.02**	0.0026 U	0.0027 U	**0.014** j	**0.044**
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.064**	**0.23**	**0.089**	**0.54**	**0.074**	0.0034 U	**0.06**	**0.11**	**0.25**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.11**	**0.17**	**0.11**	**1.4**	**0.075** J	0.0031 U	**0.074**	**0.12**	**0.24**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.16**	**0.13**	**0.14**	**0.83**	**0.094**	0.0051 U	**0.082**	**0.12**	**0.33**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.1**	**0.071**	**0.1**	**0.36**	**0.048**	0.0041 U	**0.06**	**0.09**	**0.22**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.15**	**0.26**	**0.18**	**1.2**	**0.075**	0.0035 U	**0.12**	**0.22**	**0.36**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.038**	**0.039**	**0.046**	**0.17**	**0.011**	0.0019 U	**0.022**	**0.032**	**0.088**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.15**	**0.37**	**0.24**	**2.2**	**0.15**	**0.0093** j	**0.14**	**0.24**	**0.5**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.084**	**0.067**	**0.089**	**0.37**	**0.04**	0.0044 U	**0.052**	**0.076**	**0.2**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.34**	**0.27**	**0.37**	**2.9**	**0.18** J	**0.013** j	**0.15**	**0.24**	**0.86**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.25**	**0.32**	**0.38**	**1.8**	**0.15**	0.0026 U	**0.2**	**0.3**	**0.82**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	**0.022**	**0.02**	**0.017** j	**0.032**	**0.017**	0.0029 U	0.003 U	0.0029 U	**0.019**
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.792**	**0.986**	**0.945**	**5.77**	**0.445**	**0**	**0.55**	**0.868**	**2.038**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.22**	**0.20**	**0.22**	**1.3**	**0.13**	**0**	**0.12**	**0.18**	**0.49**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.22**	**0.20**	**0.22**	**1.3**	**0.13**	**0.0035**	**0.12**	**0.18**	**0.49**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	1.2 U	**1.2**	0.12 U	**2.0**	**3.13**	0.87 U	0.16 U	0.11 U	**1.2**
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	**17**	0.19 U	0.21 U	**2.3**	**1.80** J	1.5 U	0.27 U	0.19 U	0.25 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**12**	**8.8**	**1.3**	**8.0**	**4.96**	1.2 U	**0.88** j	**1.3**	**3.4**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	**4.8** j	**2.6**	**0.42** j	**2.7**	**3.13**	1.2 U	0.21 U	**0.49** j	**1.2**
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**18**	**0.74**	**0.92**	**2.1**	**5.22**	0.73 U	0.13 U	**0.49** j	**2.0**
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**25**	**7.8**	**3.4**	**20**	**19.3**	0.96 U	**2.9**	**3.8**	**11**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**44**	**5.7**	**4.2**	**51**	**19.6** J	0.87 U	**3.6**	**4.2**	**11**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**64**	**4.4**	**5.3**	**30**	**24.5**	1.4 U	**4.0**	**4.2**	**15**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**40**	**2.4**	**3.8**	**13**	**12.5**	1.2 U	**2.9**	**3.1**	**10**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**60**	**8.8**	**6.9**	**44**	**19.6**	0.99 U	**5.9**	**7.6**	**17**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**15**	**1.3**	**1.8**	**6.2**	**2.87**	0.54 U	**1.1**	**1.1**	**4.0**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**60**	**13**	**9.2**	**80**	**39.2**	**2.6** j	**6.9**	**8.3**	**23**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**33**	**2.3**	**3.4**	**14**	**10.4**	1.2 U	**2.5**	**2.6**	**9.2**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**135**	**9.1**	**14**	**106**	**47.0** J	**3.7** j	**7.4**	**8.3**	**39**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**100**	**11**	**15**	**66**	**39.2**	0.73 U	**9.8**	**10**	**38**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	**8.8**	**0.68**	**0.65** j	**1.2**	**4.44**	0.82 U	0.15 U	0.10 U	**0.87**
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**78**	**21**	**6.0**	**37**	**37.6**	**0**	**3.8**	**6.0**	**19**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**551**	**57**	**63**	**410**	**215**	**6.3**	**44**	**50**	**166**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0017 U	0.0018 U	0.0018 U	0.0018 U		0.0017 U	0.0018 U	0.0018 U	0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	**0.0025** j	0.0011 U	0.0011 U	**0.0046** j		0.001 U	0.0011 U	0.0011 U	0.0011 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	**0.0043** j	0.0012 U	**0.0028** j	**0.0048**		0.0011 U	0.0012 U	0.0011 U	**0.0055**
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	0.0027 U	0.0028 U	**0.0039** j	**0.0046** j		0.0027 U	0.0028 U	0.0028 U	**0.0072** j
Benzoic acid	SW8270D	mg/kg dw	0.65	--	0.094 U	**0.22** j	**0.33** j	**0.22** j		0.094 U	0.098 U	**0.15** j	**0.36** j
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.016** j	**0.16**	**0.13**	**0.064**		**0.0094** j	**0.04**	**0.072**	**0.12**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	**0.012** j	**0.041**	**0.014** j	**0.041**	**0.0084**	0.0038 U	0.004 U	0.0039 U	**0.029**
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U		0.0012 U	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.0009 U	0.00093 U	0.00094 U	0.00093 U		0.0009 U	0.00093 U	0.00092 U	0.00092 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	**0.0034** j	**0.0025** j	0.0013 U	0.0013 U		0.0013 U	0.0013 U	0.0013 U	0.0013 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	0.0017 U	0.0018 U	**0.0039** j	**0.0043** j		0.0017 U	0.0018 U	0.0017 U	**0.0059**
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	**0.011** j	**0.013** j	**0.018** j	**0.028** j		0.0062 U	0.0064 U	**0.01** j	**0.034** j
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	**0.096**	**0.047** j	0.014 U	**0.042** j		0.013 U	0.014 U	**0.016** j	**0.051** J-
Phenol	SW8270D	mg/kg dw	0.42	--	**0.069**	**0.077**	**0.046**	**0.098**		0.0081 U	**0.016** j	**0.021**	**0.08**
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.68 U	0.061 U	0.069 U	0.066 U		0.48 U	0.088 U	0.063 U	0.083 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**1.0** j	0.037 U	0.042 U	**0.17** j		0.28 U	0.054 U	0.038 U	0.050 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**1.7** j	0.041 U	**0.11** j	**0.18**		0.31 U	0.059 U	0.038 U	**0.25**
Dibenzofuran	SW8270D	mg/kg-OC	--	--	**4.8** j	**1.4**	**0.53** j	**1.5**	**2.19**	1.1 U	0.20 U	0.14 U	**1.3**
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.48 U	0.041 U	0.046 U	0.044 U		0.34 U	0.059 U	0.042 U	0.055 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.36 U	0.031 U	0.036 U	0.034 U		0.25 U	0.046 U	0.032 U	0.042 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	**1.4** j	**0.084** j	0.050 U	0.047 U		0.37 U	0.064 U	0.045 U	0.060 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples								
					SED-06				SED-07				
					SED-SC-06	SED-SC-06	SED-SC-06	SED-SC-06	SED-SS-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SS-08
					5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012
					SED-SC-06-2-4-052912	SED-SC-06-4-6-052912	SED-SC-06-6-8-052912	SED-SC-06-8-10-052912	SED-SS-07-052212	SED-SC-07-0-1-053012	SED-SC-07-2-4-053012	SED-SC-07-6-8-053012	SED-SS-08-052212
					2 - 4 ft	4-6 ft	6 - 8 ft	8-10 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	**0.14**	**2.2**	**0.57**	**0.21**	0.0032 U	**0.012** j	**0.018** j	**0.014** j	0.0032 U
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	**0.1**	**0.053** J	0.0056 U	**0.022** J	0.0056 U	0.0055 U	**0.021**	0.0054 U	0.0056 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.98**	**9.3**	**0.39**	**0.12**	**0.053**	**0.033**	**0.15**	**0.036**	**0.023**
Fluorene	SW8270D	mg/kg dw	0.54	--	**0.34**	**1.6**	**0.47**	**0.11**	0.0043 U	**0.014** j	**0.019**	**0.02**	0.0042 U
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.12**	**0.22**	**0.21**	**0.17**	0.0027 U	**0.012** j	**0.04**	**0.052**	0.0027 U
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**1.3**	**6.2**	**1.4**	**0.19**	**0.084**	**0.12**	**0.12**	**0.077**	**0.057**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**2**	**4.1** J	**0.37**	**0.12** J	**0.09**	**0.14**	**0.18**	**0.053**	**0.062**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**1.9**	**2**	**0.19**	**0.076**	**0.079**	**0.17**	**0.33**	**0.066**	**0.057**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.77**	**0.59**	**0.085**	**0.038**	**0.051**	**0.11**	**0.18**	**0.046**	0.0043 U
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**2.9**	**5.6**	**0.42**	**0.14**	**0.16**	**0.21**	**0.46**	**0.066**	**0.1**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.35**	**0.16**	**0.032**	**0.011**	**0.017**	**0.04**	**0.056**	**0.012**	**0.011**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**4.3**	**14**	**1.8**	**0.37**	**0.18**	**0.29**	**0.13**	**0.11**	**0.12**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.7**	**0.49**	**0.076**	**0.03**	0.0046 U	**0.11**	**0.16**	**0.036**	0.0046 U
Pyrene	SW8270D	mg/kg dw	2.60	--	**6.3**	**13** J	**1.6**	**0.41** J	**0.16**	**0.35**	**0.9**	**0.22**	**0.11**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**4**	**3.1**	**0.51**	**0.14**	**0.2**	**0.4**	**0.79**	**0.14**	**0.14**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	**0.053**	**0.16**	**0.081**	**0.04**	0.003 U	0.003 U	**0.02**	**0.023**	0.003 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**11.85**	**15.45**	**1.598**	**0.517**	**0.546**	**1.07**	**1.976**	**0.373**	**0.37**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**2.7**	**2.9**	**0.30**	**0.11**	**0.12**	**0.25**	**0.47**	**0.094**	**0.083**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**2.7**	**2.9**	**0.30**	**0.11**	**0.12**	**0.25**	**0.47**	**0.094**	**0.083**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	**7.2**	**106**	**30**	**7**	0.11 U	**0.53** j	**0.94** j	**0.91** j	0.11 U
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	**5.1**	**2.6** J	0.30 U	**0.7** J	0.19 U	0.24 U	**1.1**	0.35 U	0.19 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**50**	**449**	**21**	**4**	**1.8**	**1.5**	**7.9**	**2.3**	**0.80**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	**17**	**77**	**25**	**3**	0.15 U	**0.62** j	**0.99**	**1.3**	0.15 U
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**6.2**	**10.6**	**11**	**5**	0.092 U	**0.53** j	**2.1**	**3.4**	0.094 U
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**67**	**300**	**74**	**6**	**2.9**	**5.3**	**6.3**	**5.0**	**2.0**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**103**	**198** J	**20**	**4** J	**3.1**	**6.2**	**9.4**	**3.4**	**2.2**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**97**	**97**	**10**	**2**	**2.7**	**7.5**	**17**	**4.3**	**2.0**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**39**	**29**	**4.5**	**1.2**	**1.7**	**4.8**	**9.4**	**3.0**	0.15 U
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**149**	**271**	**22**	**4**	**5.5**	**9.3**	**24**	**4.3**	**3.5**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**18**	**7.7**	**1.7**	**0.4**	**0.58**	**1.8**	**2.9**	**0.78**	**0.38**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**221**	**676**	**95**	**12**	**6.1**	**13**	**6.8**	**7.1**	**4.2**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**36**	**24**	**4.0**	**1.0**	0.16 U	**4.8**	**8.4**	**2.3**	0.16 U
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**323**	**628** J	**85**	**13** J	**5.5**	**15**	**47**	**14**	**3.8**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**205**	**150**	**27**	**4**	**6.8**	**18**	**41**	**9.1**	**4.9**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	**2.7**	**7.7**	**4.3**	**1.3**	0.10 U	0.13 U	**1.0**	**1.5**	0.10 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**153**	**946**	**161**	**26**	**4.7**	**8.4**	**19**	**13**	**2.8**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**1191**	**2079**	**269**	**42**	**32**	**80**	**167**	**49**	**21**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	**0.0028** j		0.0018 U		0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	**0.0037** j		0.0011 U		0.0011 U	0.0011 U	0.001 U	0.001 U	0.0011 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	**0.0074 0**		**0.0064**		0.0012 U	0.0011 U	**0.0042** j	0.0011 U	0.0012 U
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	**0.01** j		**0.0084** j		**0.003** j	0.0028 U	**0.0033** j	0.0027 U	0.0028 U
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.14** j		**0.3** j		**0.22** j	0.097 U	**0.1** j	0.096 U	**0.1** j
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.038**		**0.07**		**0.2**	**0.03**	**0.045**	**0.023**	**0.07**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	**0.13**	**0.78**	**0.24**	**0.072**	0.0041 U	**0.012** j	**0.018** j	**0.018** j	0.004 U
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U		0.0012 U		0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00091 U		0.00094 U		0.00095 U	0.00093 U	0.00091 U	0.00091 U	0.00094 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.0013 U		0.0014 U		0.0014 U	**0.0025** j	**0.0039** j	**0.0033** j	0.0013 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	**0.0084**		**0.0044** j		0.0018 U	0.0017 U	0.0017 U	0.0017 U	0.0018 U
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	**0.03** j		**0.034** j		0.0066 U	**0.012** j	**0.019** j	**0.016** j	0.0065 U
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	**0.071** J-		0.014 UJ		0.014 U	0.014 U	**0.017** j	0.014 U	0.014 U
Phenol	SW8270D	mg/kg dw	0.42	--	**0.094**		**0.061**		0.0085 U	**0.019**	**0.044**	**0.018** j	0.0084 U
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.14** j		0.095 U		0.061 U	0.079 U	0.094 U	0.12 U	0.063 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.19** j		0.058 U		0.038 U	0.048 U	0.052 U	0.065 U	0.038 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.38 0**		**0.34**		0.041 U	0.048 U	**0.22** j	0.071 U	0.042 U
Dibenzofuran	SW8270D	mg/kg-OC	--	--	**6.7**	**37.68**	**13**	**2.27**	0.14 U	**0.53** j	**0.94** j	**1.2** j	0.14 U
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.062 U		0.063 U		0.041 U	0.053 U	0.063 U	0.078 U	0.042 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.047 U		0.050 U		0.032 U	0.041 U	0.048 U	0.059 U	0.033 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	0.067 U		0.074 U		0.048 U	**0.11** j	**0.20** j	**0.21** j	0.045 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples							
					SED-08					SED-09	SED-09		
					SED-SS-08	SED-SC-08	SED-SC-08	SED-SC-08	SED-SC-08	SED-SS-09	SED-SC-09	SED-SC-09	SED-SC-09
					5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012
					DUP-052212-1	SED-SC-08-0-1-053012	SED-SC-08-2-4-053012	DUP-053012-2	SED-SC-08-6-8-053012	SED-SS-09-052312	SED-SC-09-0-1-052912	SED-SC-09-2-4-052912	SED-SC-09-6-8-052912
					0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.0031 U	**0.013** j	**0.016** j	**0.015** j	0.0031 U	**0.0098** j	**0.012** j	**0.022**	**0.05**
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	0.0055 U	0.0055 U	**0.013** j	**0.012** j	0.0054 U	**0.012** j	0.0055 U	0.0054 U	**0.038**
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.067**	**0.04**	**0.042**	**0.038**	**0.016** j	**0.033**	**0.1**	**0.049**	**0.045**
Fluorene	SW8270D	mg/kg dw	0.54	--	0.0042 U	**0.02**	**0.023**	**0.018** j	**0.0095** j	**0.015** j	**0.042**	**0.03**	**0.042**
Naphthalene	SW8270D	mg/kg dw	2.10	--	0.0026 U	**0.031**	**0.033**	**0.021**	**0.012** j	**0.028**	**0.036**	**0.042**	**0.15**
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.076**	**0.11**	**0.14**	**0.14**	**0.049**	**0.1**	**0.12**	**0.09**	**0.12**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.078**	**0.14**	**0.11**	**0.12**	**0.028**	**0.12**	**0.089**	**0.062**	**0.042**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.072**	**0.18**	**0.18**	**0.18**	**0.037**	**0.13**	**0.05**	0.0051 U	**0.05**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.048**	**0.13**	**0.11**	**0.11**	**0.025**	**0.09**	**0.025**	**0.023**	**0.037**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.14**	**0.2**	**0.15**	**0.16**	**0.038**	**0.22**	**0.31**	**0.07**	**0.062**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.014**	**0.047**	**0.04**	**0.04**	**0.0084**	**0.043**	**0.012**	**0.0091**	**0.011**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.18**	**0.28**	**0.24**	**0.27**	**0.069**	**0.23**	**0.11**	**0.17**	**0.12**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	0.0045 U	**0.12**	**0.094**	**0.098**	**0.019**	**0.079**	**0.023**	**0.02**	**0.027**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.15**	**0.57**	**0.57**	**0.54**	**0.17**	**0.24**	**0.27**	**0.29**	**0.26**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.18**	**0.5**	**0.43**	**0.39**	**0.084**	**0.3**	**0.13**	**0.12**	**0.12**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.0029 U	**0.014** j	**0.02**	**0.013** j	0.0029 U	**0.011** j	**0.02**	**0.022**	**0.043**
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.484**	**1.187**	**1.004**	**0.988**	**0.2144**	**0.892**	**0.614**	**0.2811**	**0.312**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.10**	**0.28**	**0.26**	**0.26**	**0.054**	**0.20**	**0.082**	**0.025**	**0.074**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.11**	**0.28**	**0.26**	**0.26**	**0.054**	**0.20**	**0.082**	**0.027**	**0.074**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	0.11 U	**0.66** j	**0.98** j	**0.78** j	0.16 U	**0.36** j	**0.54** j	**0.83**	**3.0**
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	0.19 U	0.28 U	**0.79** j	**0.63** j	0.28 U	**0.44** j	0.25 U	0.20 U	**2.3**
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**2.3**	**2.0**	**2.6**	**2.0**	**0.83** j	**1.2**	**4.5**	**1.9**	**2.7**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	0.14 U	**1.0**	**1.4**	**0.94** j	**0.49** j	**0.56** j	**1.9**	**1.1**	**2.5**
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	0.09 U	**1.6**	**2.0**	**1.1**	**0.63** j	**1.0**	**1.6**	**1.6**	**8.9**
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**2.6**	**5.6**	**8.5**	**7.3**	**2.6**	**3.7**	**5.4**	**3.4**	**7.1**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**2.7**	**7.1**	**6.7**	**6.3**	**1.5**	**4.4**	**4.0**	**2.3**	**2.5**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**2.5**	**9.2**	**11**	**9.4**	**1.9**	**4.8**	**2.2**	0.19 U	**3.0**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**1.7**	**6.6**	**6.7**	**5.7**	**1.3**	**3.3**	**1.1**	**0.87**	**2.2**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**4.8**	**10**	**9.1**	**8.3**	**2.0**	**8.1**	**14**	**2.7**	**3.7**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**0.48**	**2.4**	**2.4**	**2.1**	**0.44**	**1.6**	**0.54**	**0.34**	**0.65**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**6.2**	**14**	**15**	**14**	**3.6**	**8.5**	**4.9**	**6.4**	**7.1**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	0.16 U	**6.1**	**5.7**	**5.1**	**0.99**	**2.9**	**1.0**	**0.76**	**1.6**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**5.2**	**29**	**35**	**28**	**8.9**	**8.9**	**12**	**11**	**15**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**6.2**	**26**	**26**	**20**	**4.4**	**11**	**5.8**	**4.5**	**7.1**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	0.10 U	**0.71** j	**1.2**	**0.68** j	0.15 U	**0.41** j	**0.9**	**0.83**	**2.6**
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**4.9**	**11**	**16**	**13**	**4.5**	**7.3**	**14**	**8.8**	**26**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**30**	**111**	**117**	**99**	**25**	**54**	**45**	**29**	**43**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0018 U	0.0018 U	0.0018 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.0011 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.0011 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	0.0011 U	**0.0031** j	**0.0066**	**0.0048**	0.0011 U	0.0012 U	**0.0066**	**0.0032** j	**0.0047** j
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	0.0028 U	**0.0045** j	**0.0041** j	**0.0033** j	0.0027 U	0.0028 U	**0.0042** j	0.0027 U	**0.0063** j
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.17** j	**0.24** j	0.097 U	0.094 U	0.096 U	**0.13** j	**0.2** j	**0.097** j	0.098 U
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.11**	**0.12**	**0.042**	**0.023** J+	**0.0098** j	**0.054**	**0.062**	**0.034**	**0.021**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	0.0039 U	**0.022**	**0.02**	**0.012** j	**0.01** j	0.004 U	**0.02**	**0.027**	**0.04**
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00092 U	0.00092 U	0.00092 U	0.0009 U	0.00091 U	0.00094 U	0.00093 U	0.00091 U	0.00093 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.0013 U	0.0013 U	**0.0063** j	**0.0064** j	**0.0026** j	0.0014 U	0.0013 U	0.0013 U	0.0013 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	0.0017 U	**0.0043** j	**0.0028** j	0.0017 U	0.0017 U	0.0018 U	**0.0033** j	**0.0024** j	**0.0076**
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	0.0063 U	**0.02** j	**0.021** j	**0.02** j	0.0063 U	**0.02** j	**0.023** j	**0.036** j	**0.032** j
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	0.014 U	**0.018** j	**0.019** j	**0.023** j	0.014 U	**0.064**	0.014 UJ	**0.035** J-	0.014 UJ
Phenol	SW8270D	mg/kg dw	0.42	--	0.0083 U	**0.11**	**0.057**	**0.05**	**0.018** j	**0.13**	**0.089**	**0.19**	**0.034**
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.062 U	0.092 U	0.11 U	0.089 U	0.094 U	0.067 U	0.080 U	0.068 U	0.11 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.038 U	0.056 U	0.067 U	0.052 U	0.052 U	0.041 U	0.049 U	0.038 U	0.065 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.038 U	**0.16** j	**0.40**	**0.25**	0.057 U	0.044 U	**0.29**	**0.12** j	**0.28** j
Dibenzofuran	SW8270D	mg/kg-OC	--	--	0.13 U	**1.1**	**1.2**	**0.63** j	**0.52** j	0.15 U	**0.89**	**1.0**	**2.4**
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.041 U	0.061 U	0.073 U	0.063 U	0.063 U	0.044 U	0.054 U	0.045 U	0.071 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.032 U	0.047 U	0.056 U	0.047 U	0.047 U	0.035 U	0.042 U	0.034 U	0.055 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	0.045 U	0.066 U	**0.38** j	**0.33** j	**0.14** j	0.052 U	0.058 U	0.049 U	0.077 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples				On-Site Samples				
					SED-13				SED-14				
					SED-SS-13	SED-SC-13	SED-SC-13	SED-SC-13	SED-SS-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14
					5/23/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012
					SED-SS-13-052312	SED-SC-13-0-1-053112	SED-SC-13-2-4-053112	SED-SC-13-6-7-053112	SED-SS-14-052312	SED-SC-14-0-1-052912	SED-SC-14-2-4-052912	SED-SC-14-4-6-052912	SED-SC-14-6-8-052912
					0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 7 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft	6 - 8 ft
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.0032 U	**0.02**	0.0032 U	0.003 U	0.0031 U	**0.052**	**0.11**	**0.017**	0.0031 U
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	0.0056 U	**0.016** j	0.0056 U	0.0053 U	**0.054**	**0.5**	**0.37**	**0.011** J	0.0054 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.022**	**0.054**	**0.014** j	0.0042 U	**0.032**	**0.29**	**0.21**	**0.022**	0.0043 U
Fluorene	SW8270D	mg/kg dw	0.54	--	0.0042 U	**0.02**	0.0043 U	0.004 U	0.0041 U	**0.089**	**0.079**	**0.016**	0.0041 U
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.012** j	**0.031**	**0.015** j	0.0026 U	**0.042**	**0.6**	**0.44**	**0.027**	0.0026 U
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.07**	**0.23**	**0.047**	0.0034 U	**0.068**	**0.47**	**0.28**	**0.049**	**0.01** j
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.086**	**0.2**	**0.028**	0.0031 U	**0.18**	**1**	**0.94**	**0.045** J	**0.0095** j
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.098**	**0.29**	**0.046**	0.0051 U	**0.22**	**1.4**	**1.2**	**0.04**	**0.01** j
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.073**	**0.22**	**0.032**	0.0041 U	**0.13**	**0.56**	**0.48**	**0.024**	0.0042 U
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.14**	**0.33**	**0.039**	0.0035 U	**0.27**	**1.5**	**1.3**	**0.047**	**0.012** j
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.031**	**0.086**	**0.0091**	0.0019 U	**0.041**	**0.23**	**0.16**	**0.0052**	0.0019 U
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.16**	**0.47**	**0.055**	**0.011** j	**0.29**	**1.4**	**1.1**	**0.1**	**0.017** j
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.064**	**0.19**	**0.024**	0.0043 U	**0.11**	**0.53**	**0.44**	**0.018**	0.0044 U
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.17**	**0.57**	**0.15**	**0.019**	**0.34**	**2.5**	**1**	**0.14** J	**0.03**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.24**	**0.68**	**0.097**	**0.011** j	**0.3**	**2**	**1.7**	**0.059**	**0.013** j
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.003 U	**0.016** j	**0.0098** j	0.0028 U	**0.027**	**0.31**	**0.2**	**0.015**	0.0029 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.659**	**1.776**	**0.2431**	**0.011**	**1.121**	**6.66**	**5.74**	**0.2142**	**0.0445**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.15**	**0.43**	**0.065**	**0.0011**	**0.30**	**1.9**	**1.6**	**0.055**	**0.012**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.15**	**0.43**	**0.065**	**0.0044**	**0.30**	**1.9**	**1.6**	**0.055**	**0.013**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	0.12 U	**0.90**	0.21 U	0.15 U	0.11 U	**2.6**	**7.6**	**1.10**	0.083 U
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	0.21 U	**0.72** j	0.38 U	0.26 U	**2.0**	**25**	**26**	**0.71** J	0.14 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**0.81**	**2.4**	**0.94** j	0.21 U	**1.2**	**14**	**14**	**1.4**	0.11 U
Fluorene [3]	SW8270D	mg/kg-OC	23	--	0.15 U	**0.90**	0.29 U	0.20 U	0.15 U	**4.4**	**5.4**	**1.03**	0.11 U
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**0.44** j	**1.4**	**1.0** j	0.13 U	**1.5**	**30**	**30**	**1.7**	0.069 U
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**2.6**	**10**	**3.2**	0.17 U	**2.5**	**23**	**19**	**3.2**	**0.27** j
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**3.2**	**9.0**	**1.9**	0.15 U	**6.5**	**50**	**65**	**2.9** J	**0.25** j
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**3.6**	**13**	**3.1**	0.25 U	**8.0**	**69**	**83**	**2.6**	**0.27** j
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**2.7**	**9.9**	**2.1**	0.20 U	**4.7**	**28**	**33**	**1.6**	0.11 U
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**5.2**	**15**	**2.6**	0.17 U	**9.8**	**74**	**90**	**3.0**	**0.32** j
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**1.1**	**3.9**	**0.61**	0.09 U	**1.5**	**11**	**11**	**0.34**	0.051 U
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**5.9**	**21**	**3.7**	**0.54** j	**11**	**69**	**76**	**6.5**	**0.45** j
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**2.4**	**8.6**	**1.6**	0.21 U	**4.0**	**26**	**30**	**1.2**	0.12 U
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**6.3**	**26**	**10**	**0.94**	**12**	**124**	**69**	**9.0** J	**0.80**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**8.9**	**31**	**6.5**	**0.54** j	**11**	**99**	**117**	**3.8**	**0.35** j
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	0.11 U	**0.72** j	**0.66** j	0.14 U	**0.98**	**15**	**14**	**0.97**	0.08 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**3.8**	**17**	**5.1**	**0.00**	**7.1**	**99**	**103**	**9**	**0.27**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**39**	**137**	**32**	**2.0**	**68**	**550**	**574**	**31**	**2.4**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0018 U	0.0018 U	0.0018 U	0.0017 U	0.0017 U	**0.0054**	0.0017 U		0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.0011 U	0.0011 U	0.0011 U	0.001 U	0.001 U	**0.0054**	0.001 U		0.001 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	0.0012 U	**0.0049**	**0.004** j	0.0011 U	0.0011 U	**0.014**	0.0011 U		0.0011 U
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	0.0028 U	**0.0038** j	**0.0031** j	0.0027 U	0.0027 U	**0.018** j	**0.0067** j		0.0027 U
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.11** j	0.097 U	0.099 U	0.094 U	0.095 U	**0.22** j	**0.095** j		0.096 U
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.047**	**0.028**	**0.017** j	**0.0079** j	0.0066 U	**0.025**	**0.022**		0.0067 U
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	0.004 U	**0.018** j	0.004 U	0.0038 U	0.0038 U	**0.087**	**0.07**	**0.013**	0.0039 U
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	**0.014**	0.0012 U		0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00094 U	0.00092 U	0.00094 U	0.00089 U	0.0009 U	0.00093 U	0.0009 U		0.00091 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.0013 U	0.0013 U	0.0014 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U		0.0013 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	0.0018 U	**0.0034** j	**0.0026** j	0.0017 U	0.0017 U	**0.0097**	**0.0037** j		0.0017 U
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	0.0065 U	**0.027** j	**0.014** j	**0.0093** j	0.0062 U	**0.11**	**0.028** j		0.0063 U
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	0.014 U	**0.14**	**0.019** j	0.013 U	**0.15**	**0.94** J-	**0.097** J-		0.014 UJ
Phenol	SW8270D	mg/kg dw	0.42	--	**0.02**	**0.14**	**0.034**	0.008 U	**0.049**	**0.43**	**0.05**		0.0082 U
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.066 U	0.081 U	0.12 U	0.084 U	0.062 U	**0.27**	0.12 U		0.048 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.041 U	0.050 U	0.074 U	0.050 U	0.036 U	**0.27**	0.069 U		0.027 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.044 U	**0.22**	**0.27** j	0.054 U	0.040 U	**0.69**	0.076 U		0.029 U
Dibenzofuran	SW8270D	mg/kg-OC	--	--	0.15 U	**0.81** j	0.27 U	0.19 U	0.14 U	**4.3**	**4.8**	**0.84**	0.10 U
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.044 U	0.054 U	0.081 U	0.059 U	0.044 U	**0.69**	0.083 U		0.032 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.035 U	0.041 U	0.063 U	0.044 U	0.033 U	0.046 U	0.062 U		0.024 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	0.048 U	0.059 U	0.094 U	0.064 U	0.047 U	0.064 U	0.090 U		0.035 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor			On-Site Samples						
						SED-15	SED-15		SED-16				SED-17
					SED-SC-14	SED-SS-15	SED-SC-15	SED-SC-15	SED-SS-16	SED-SC-16	SED-SC-16	SED-SC-16	SED-SS-17
					5/29/2012	5/22/2012	5/31/2012	5/31/2012	5/22/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012
					DUP-052912-2	SED-SS-15-052212	SED-SC-15-0-1-053112	SED-SC-15-2-4-053112	SED-SS-16-052212	SED-SC-16-0-1-053112	SED-SC-16-2-3.5-053112	DUP-053112-2	SED-SS-17-052312
					6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 3.5 ft	2 - 3.5 ft	0 - 10 cm
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.0032 U	0.0031 U	**0.031**	**0.022**	0.0031 U	**0.077**	**0.047**	**0.042**	0.0033 U
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	0.0055 U	**0.023**	**0.27**	**0.047**	0.0054 U	**0.042**	**0.058**	**0.049**	0.0057 U
Anthracene	SW8270D	mg/kg dw	0.96	--	0.0044 U	**0.024**	**0.14**	**0.03**	**0.044**	**0.1**	**0.037**	**0.037**	**0.026**
Fluorene	SW8270D	mg/kg dw	0.54	--	0.0042 U	0.0041 U	**0.049**	**0.025**	0.0041 U	**0.071**	**0.049**	**0.042**	**0.013** j
Naphthalene	SW8270D	mg/kg dw	2.10	--	0.0027 U	**0.025**	**0.27**	**0.15**	**0.047**	**0.13**	**0.25**	**0.18**	**0.028**
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.014** j	**0.08**	**0.3**	**0.11**	**0.14**	**0.29**	**0.17**	**0.15**	**0.11**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.012** j	**0.13**	**0.6**	**0.071**	**0.15**	**0.28**	**0.047**	**0.073**	**0.12**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.011** j	**0.16**	**0.94**	**0.091**	**0.17**	**0.29**	**0.048**	**0.065**	**0.13**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	0.0043 U	**0.11**	**0.57**	**0.061**	**0.12**	**0.17**	**0.033**	**0.045**	**0.092**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.014** j	**0.23**	**0.9**	**0.11**	**0.28**	**0.43**	**0.062**	**0.087**	**0.21**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	0.002 U	**0.048**	**0.17**	**0.018**	**0.043**	**0.075**	**0.013**	**0.016**	**0.034**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.024**	**0.28**	**0.72**	**0.16**	**0.55**	**1.1**	**0.19**	**0.22**	**0.3**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	0.0045 U	**0.093**	**0.49**	**0.05**	**0.11**	**0.17**	**0.03**	**0.037**	**0.081**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.036**	**0.3**	**1.4**	**0.21**	**0.45**	**0.91**	**0.19**	**0.21**	**0.27**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.016** j	**0.34**	**1.2**	**0.15**	**0.42**	**0.68**	**0.096**	**0.14**	**0.3**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.003 U	**0.012** j	**0.16**	**0.038**	0.0029 U	**0.058**	**0.059**	**0.046**	0.003 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.053**	**1.001**	**4.3**	**0.49**	**1.173**	**1.925**	**0.296**	**0.418**	**0.875**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.014**	**0.24**	**1.2**	**0.13**	**0.26**	**0.44**	**0.071**	**0.097**	**0.20**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.015**	**0.24**	**1.2**	**0.13**	**0.26**	**0.44**	**0.071**	**0.097**	**0.20**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	0.11 U	0.13 U	**1.8**	**1.2**	0.14 U	**3.7**	**2.2**	**1.8**	0.099 U
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	0.19 U	**0.99**	**15**	**2.5**	0.25 U	**2.0**	**2.7**	**2.1**	0.17 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	0.15 U	**1.0**	**8.0**	**1.6**	**2.0**	**4.8**	**1.7**	**1.6**	**0.78**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	0.14 U	0.18 U	**2.8**	**1.3**	0.19 U	**3.4**	**2.3**	**1.8**	**0.39** j
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	0.09 U	**1.1**	**15**	**8.0**	**2.1**	**6.3**	**12**	**7.8**	**0.84**
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**0.48** j	**3.4**	**17**	**5.9**	**6.4**	**14**	**7.8**	**6.5**	**3.3**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**0.41** j	**5.6**	**34**	**3.8**	**6.8**	**14**	**2.2**	**3.1**	**3.6**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**0.38** j	**6.9**	**54**	**4.8**	**7.7**	**14**	**2.2**	**2.8**	**3.9**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	0.15 U	**4.7**	**33**	**3.2**	**5.5**	**8.2**	**1.5**	**1.9**	**2.8**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**0.48** j	**9.9**	**51**	**5.9**	**13**	**21**	**2.9**	**3.8**	**6.3**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	0.069 U	**2.1**	**9.7**	**0.96**	**2.0**	**3.6**	**0.60**	**0.69**	**1.0**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**0.83**	**12**	**41**	**8.5**	**25**	**53**	**8.8**	**9.5**	**9.0**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	0.16 U	**4.0**	**28**	**2.7**	**5.0**	**8.2**	**1.4**	**1.6**	**2.4**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**1.2**	**13**	**80**	**11**	**20**	**44**	**8.8**	**9.1**	**8.1**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**0.55** j	**15**	**69**	**8.0**	**19**	**33**	**4.4**	**6.0**	**9.0**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	0.10 U	**0.52** j	**9.1**	**2.0**	0.13 U	**2.8**	**2.7**	**2.0**	0.09 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**0.48**	**6.6**	**61**	**20**	**11**	**34**	**28**	**22**	**5.3**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**3.9**	**73**	**399**	**49**	**104**	**198**	**33**	**38**	**46**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0018 U	0.0017 U	**0.0053**	0.0017 U	0.0017 U	0.0018 U	0.0018 U	0.0017 U	0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.0011 U	0.001 U	**0.008**	0.001 U	0.001 U	**0.0031** j	0.001 U	0.001 U	0.0011 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	0.0012 U	0.0011 U	**0.015**	**0.0041** j	**0.0031** j	**0.007**	**0.0039** j	0.0011 U	0.0012 U
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	0.0028 U	**0.0027** j	**0.0087** j	**0.0084** j	**0.0032** j	**0.0062** j	**0.024**	**0.013** j	0.0029 U
Benzoic acid	SW8270D	mg/kg dw	0.65	--	0.098 U	**0.21** j	0.092 U	0.093 U	**0.27** j	**0.48**	**0.19** j	**0.12** j	**0.13** j
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	0.0068 U	**0.1**	**0.019**	**0.018** j	**0.13**	**0.12**	**0.038**	**0.022**	**0.056**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	0.004 U	0.0038 U	**0.055**	**0.023**	0.0038 U	**0.082**	**0.039**	**0.034**	0.0041 U
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U	0.0012 U	**0.033**	0.0012 U	**0.0033** j	**0.014**	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00093 U	0.0009 U	0.00088 U	0.00089 U	0.0009 U	0.00092 U	0.00091 U	0.00089 U	0.00095 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**0.0028** j	0.0013 U	0.0013 U	0.0013 U	0.0014 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	0.0018 U	0.0017 U	**0.0046**	0.0017 U	0.0017 U	**0.0074**	**0.024**	**0.012**	0.0018 U
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	0.0064 U	**0.011** j	**0.082**	**0.43**	0.0062 U	**0.11**	**0.13**	**0.074**	**0.024** j
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	0.014 UJ	**0.11**	**1.2**	**0.04** j	**0.31**	**0.58**	**0.023** j	**0.024** j	**0.11**
Phenol	SW8270D	mg/kg dw	0.42	--	0.0084 U	**0.066**	**0.48**	**0.19**	**0.18**	**0.49**	**0.2**	**0.11**	**0.12**
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.062 U	0.073 U	**0.30**	0.090 U	0.077 U	0.087 U	0.083 U	0.073 U	0.054 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.038 U	0.043 U	**0.46**	0.053 U	0.045 U	**0.15** j	0.046 U	0.043 U	0.033 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.041 U	0.047 U	**0.86**	**0.22** j	**0.14** j	**0.34**	**0.18** j	0.047 U	0.036 U
Dibenzofuran	SW8270D	mg/kg-OC	--	--	0.14 U	0.164 U	**3.1**	**1.2**	0.17 U	**4.0**	**1.8**	**1.5**	0.12 U
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.041 U	0.052 U	**1.9**	0.064 U	**0.15** j	**0.68**	0.055 U	0.052 U	0.036 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.032 U	0.039 U	0.050 U	0.047 U	0.041 U	0.044 U	0.042 U	0.038 U	0.029 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	0.045 U	0.056 U	0.074 U	0.069 U	**0.13** j	0.063 U	0.060 U	0.056 U	0.042 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples						LDW Samples		
					SED-17			SED-18	SED-19	SED-22			
					SED-SC-17	SED-SC-17	SED-SC-17	SED-SS-18	SED-SS-19	SED-SS-22	B4A	DR122	DR124
					5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/23/2012	5/23/2012	8/15/2004	9/14/1998	9/15/1998
					SED-SC-17-0-1-053012	SED-SC-17-2-4-053012	SED-SC-17-4-5-053012	SED-SS-18-052312	SED-SS-19-052312	SED-SS-22-052312	LDW-B4A-S	SD-DR122-0000	SD-DR124-0000
					0 - 1 ft	2 - 4 ft	4-5 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
PAHs - Dry Weight													
Acenaphthene	SW8270D	mg/kg dw	0.500	--	**0.025**	0.003 U	0.0032 U	**1.5**	**0.0096** j	0.0031 U	**0.036**	**0.02**	**0.03**
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	**0.014** j	0.0052 U	**0.02**	**0.02**	0.0055 U	**0.047**	**0.18**	0.02 U	0.02 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.054**	**0.018**	**0.017** j	**1.7**	**0.028**	**0.039**	**0.34**	**0.09**	**0.12**
Fluorene	SW8270D	mg/kg dw	0.54	--	**0.031**	0.004 U	**0.012** j	**3**	**0.011** j	**0.013** j	**0.097**	**0.04**	**0.04**
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.046**	**0.045**	**0.057**	**0.22**	**0.019**	**0.034**	**0.082**	0.02 U	0.02 U
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.26**	**0.05**	**0.046**	**7.8**	**0.1**	**0.086**	**2.4**	**0.24**	**0.43**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.19**	**0.029**	**0.068**	**0.87**	**0.1**	**0.18**	**1**	**0.35**	**0.48**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.22**	**0.032**	**0.079**	**0.35**	**0.11**	**0.26**	**1.1**	**0.36**	**0.77**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.13**	**0.023**	**0.049**	**0.096**	**0.089**	**0.14**	**0.87**	**0.26**	**0.6**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.28**	**0.04**	**0.09**	**1**	**0.16**	**0.27**	**2.6**	**0.55**	**0.79**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.052**	**0.006**	**0.02**	**0.066**	**0.031**	**0.056**	**0.13**	**0.07**	**0.14**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.45**	**0.074**	**0.087**	**3.9**	**0.22**	**0.26**	**9.3**	**0.75**	**1.1**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.12**	**0.019**	**0.04**	**0.1**	**0.078**	**0.12**	**0.89**	**0.29**	**0.68**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.56**	**0.1**	**0.13**	**2.8**	**0.21**	**0.39**	**7.1**	**0.7**	**1**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.51**	**0.07**	**0.11**	**0.92**	**0.28**	**0.4**	**3**	**0.85**	**1.7**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	**0.018** j	**0.016** j		**0.65**	0.0029 U	**0.019**	**0.053**	0.02 U	0.02 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**1.372**	**0.196**	**0.407**	**3.306**	**0.759**	**1.3**	**8.72**	**2.47**	**4.56**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.33**	**0.047**	**0.11**	**0.58**	**0.17**	**0.36**	NR	NR	NR
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.33**	**0.047**	**0.11**	**0.58**	**0.17**	**0.36**	**1.7**	**0.54**	**1.1**
PAHs - Organic Carbon Normalized													
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	**1.1**	0.20 U	0.32 U	**44**	**0.33** j	0.18 U	**1.8**	**0.92**	**1.1**
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	**0.62** j	0.34 U	**2.0**	**0.58**	0.19 U	**2.8**	**9.2**	0.92 U	0.72 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**2.4**	**1.2**	**1.7** j	**50**	**0.97**	**2.3**	**17**	**4.1**	**4.3**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	**1.4**	0.26 U	**1.2** j	**88**	**0.38** j	**0.77** j	**4.9**	**1.8**	**1.4**
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**2.0**	**3.0**	**5.7**	**6.4**	**0.66**	**2.0**	**4.2**	0.92 U	0.72 U
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**11**	**3.3**	**4.6**	**228**	**3.5**	**5.1**	**120**	**11**	**15**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**8.4**	**1.9**	**6.8**	**25**	**3.5**	**11**	**51**	**16**	**17**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**9.7**	**2.1**	**7.9**	**10**	**3.8**	**15**	**56**	**17**	**28**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**5.7**	**1.5**	**4.9**	**2.8**	**3.1**	**8.3**	**44**	**12**	**22**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**12**	**2.6**	**9.0**	**29**	**5.5**	**16**	**130**	**25**	**28**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**2.3**	**0.39**	**2.0**	**1.9**	**1.1**	**3.3**	**6.6**	**3.2**	**5.0**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**20**	**4.9**	**8.7**	**114**	**7.6**	**15**	**470**	**34**	**40**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**5.3**	**1.3**	**4.0**	**2.9**	**2.7**	**7.1**	**45**	**13**	**24**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**24.670**	**6.6**	**13**	**82**	**7.3**	**23**	**360**	**32**	**36**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**22**	**4.6**	**11**	**27**	**9.7**	**24**	**150**	**39**	**61**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	**0.79** j	**1.1** j	**0**	**19**	0.10 U	**1.1**	**2.7**	0.92 U	0.72 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**19**	**7.4**	**15**	**416**	**5.8**	**13**	**160**	**20**	**24**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**111**	**26**	**67**	**295**	**44**	**123**	**1,300**	**190**	**260**
Other SVOCs - Dry Weight													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0018 U	0.0017 U	**0.0027** j	0.0018 U	0.0018 U	0.00 U	0.02 U	0.02 U	0.02 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	**0.0026** j	0.001 U	0.0011 U	0.0011 U	0.0011 U	0.00 U	0.02 U	0.02 U	0.02 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	**0.0058**	**0.004** j	**0.0052**	0.0012 U	0.0011 U	0.00 U	0.02 U	0.02 U	0.02 U
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	**0.0048** j	**0.0037** j	**0.0048** j	0.0028 U	0.0028 U	0.00 U	0.1 UJ	0.02 U	0.02 U
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.13** j	0.093 U	0.1 UJ	**0.12** j	**0.14** j	0.09 U	0.4 U	0.2 U	0.2 U
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.035**	**0.0075** j	0.007 U	**0.066**	**0.051**	**0.03**	0.02 U	0.05 U	0.05 U
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	**0.022**	**0.01** j		**1.3**	0.0039 U	**0.01** j	**0.039**	**0.02**	**0.02**
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	**0.0046** j	**0.011**	**0.21**	0.0012 U	**0.014**	0.00 U	**0.0053** JN	0.02 U	0.02 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00092 U	0.00088 U	0.00095 U	0.00093 U	0.00092 U	0.00 U	0.02 U	0.02 U	0.02 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.0013 U	0.0013 U	**0.0055** j	**0.037**	0.0013 U	**0.00** j	0.1 U		
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	**0.008**	**0.0091**	**0.0048** j	0.0018 U	0.0017 U	0.00 U	0.02 U	0.02 U	0.02 U
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	**0.1**	**0.031** j	**0.019** j	0.0064 U	**0.014** j	0.01 U	0.02 U	0.02 U	0.02 U
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	**0.31**	**0.5**	**1.6**	0.014 U	**0.13**	**0.08**	**0.08** J	0.1 UJ	0.1 U
Phenol	SW8270D	mg/kg dw	0.42	--	**0.38**	**0.41**	**0.12**	**0.12**	**0.071**	**0.11**	0.023 U	**0.32**	0.02 U
Other SVOCs - Organic Carbon Normalized													
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.079 U	0.11 U	**0.270** j	0.053 U	0.062 U	0.10 U	1.0 U	0.92 U	0.72 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.11** j	0.066 U	0.110 U	0.032 U	0.038 U	0.06 U	1.0 U	0.92 U	0.72 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.26**	**0.26** j	**0.520**	0.035 U	0.038 U	0.07 U	1.0 U	0.92 U	0.72 U
Dibenzofuran	SW8270D	mg/kg-OC	--	--	**0.97**	**0.66** j		**38**	0.13 U	**0.59** j	**2.0**	**0.92**	**0.72**
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.20** j	**0.72**	**21**	0.035 U	**0.48**	0.07 U	**0.27** JN	0.92 U	0.72 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.041 U	0.058 U	0.095 U	0.027 U	0.032 U	0.05 U	1.0 U	0.92 U	0.72 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	0.057 U	0.086 U	**0.550** j	**1.1**	0.045 U	**0.17** j	5.1 U		

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	On-Site Samples LDW Samples					On-Site Samples LDW Samples	
					LDW-SC29	LDW-SC29	LDW-SC29	LDW-SS56	LDW-SS57	LDW-SS58	LDW-SS59
					2/21/2006	2/21/2006	2/21/2006	1/24/2005	1/24/2005	1/24/2005	3/14/2005
					LDW-SC29-0-1	LDW-SC29-1-2	LDW-SC29-2-3.6	LDW-SS56-010	LDW-SS57-010	LDW-SS58-010	LDW-SS59R2-010
					0 - 1 ft	1 - 2 ft	2 - 3.6 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
PAHs - Dry Weight											
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.02 U
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	0.058 U	**0.011** J	0.02 U	**0.077** J	0.14 U	0.15 U	0.02 U
Anthracene	SW8270D	mg/kg dw	0.96	--	0.058 U	**0.026**	0.02 U	**0.057** J	0.14 U	0.15 U	**0.075**
Fluorene	SW8270D	mg/kg dw	0.54	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.02 U
Naphthalene	SW8270D	mg/kg dw	2.10	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.02 U
Phenanthrene	SW8270D	mg/kg dw	1.50	--	0.058 U	**0.082**	0.02 U	**0.16**	**0.19**	**0.17**	**0.17**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.032** J	**0.11**	0.02 U	**0.23**	**0.19**	**0.15**	**0.2**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.032** J	**0.11**	0.02 U	**0.33**	**0.23**	**0.18**	**0.29**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	0.058 U	**0.026**	0.02 U	**0.13**	**0.099** J	**0.086** J	**0.11**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.042** J	**0.13**	0.02 U	**0.36**	**0.29**	**0.29**	**0.4**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	0.058 U	**0.011** J	0.02 U	0.098 U	0.14 U	0.15 U	**0.045**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.042** J	**0.2**	0.02 U	**0.4**	**0.42**	**0.32**	**0.52**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	0.058 U	**0.029**	0.02 U	**0.13**	**0.1** J	**0.08** J	**0.31**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.092** J	**0.31** J	**0.0099** J	**0.53**	**0.58**	**0.4**	**0.36**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.101** J	**0.23**	0.02 U	**0.59**	**0.58**	**0.44**	**0.87**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.02 U
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.207**	**0.62**	**0**	**1.64**	**1.39**	**1.14**	**2.115**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	NR	NR	NR	NR	NR	NR	NR
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.06** J	**0.15** J	0.018 U	**0.45**	**0.35** J	**0.28** J	**0.45**
PAHs - Organic Carbon Normalized											
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	3.3 U	1.9 U	4.2 U	8.7 U	8.1 U	8.4 U	0.97 U
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	3.3 U	**1.0** J	4.2 U	**6.8** J	8.1 U	8.4 U	0.97 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	3.3 U	**2.5**	4.2 U	**5.0** J	8.1 U	8.4 U	**3.6**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	3.3 U	1.9 U	4.2 U	8.7 U	8.1 U	8.4 U	0.97 U
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	3.3 U	1.9 U	4.2 U	8.7 U	8.1 U	8.4 U	0.97 U
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	3.3 U	**7.7**	4.2 U	**14**	**11**	**9.6**	**8.2**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**1.8** J	**10**	4.2 U	**20**	**11**	**8.4**	**9.7**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**1.8** J	**10**	4.2 U	**29**	**13**	**10**	**14**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	3.3 U	**2.5**	4.2 U	**12**	**5.7** J	**4.8** J	**5.3**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**2.4** J	**12**	4.2 U	**32**	**17**	**16**	**19**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	3.3 U	**1.0** J	4.2 U	8.7 U	8.1 U	8.4 U	**2.2**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**2.4** J	**19**	4.2 U	**35**	**24**	**18**	**25**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	3.3 U	**2.7**	4.2 U	**12**	**5.8** J	**4.5** J	**15**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**5.2** J	**29** J	**2.1** J	**47**	**34**	**22**	**17**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**5.7** J	**22**	4.2 U	**52**	**34**	**25**	**42**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	3.3 U	1.9 U	4.2 U	8.7 U	8.1 U	8.4 U	0.97 U
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**20**	**17**	**25**	**52**	**51**	**52**	**16**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**29**	**110**	**35**	**250**	**150**	**120**	**150**
Other SVOCs - Dry Weight											
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0059 U	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.15 U	0.0098 UJ
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.0059 U	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.15 U	0.02 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	0.0059 U	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.15 U	0.02 U
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	0.0059 U	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.15 U	0.02 U
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.073** J	**0.064** J	**0.068** J	0.065 U	1.4 U	1.5 U	0.2 U
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	0.029 U	0.029 U	0.029 U	0.033 U	0.14 U	0.15 U	0.02 U
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.02 U
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	**0.0059**	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.00098 U	0.00098 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.0059 U	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.00098 U	0.00098 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.029 U	0.029 U	0.029 U	0.033 U	0.72 U	0.74 U	0.098 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	0.0059 U	0.0059 U	0.0058 U	0.0065 U	0.14 U	0.15 U	0.02 U
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.02 U
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	0.029 U	0.029 U	0.029 U	0.033 U	0.72 U	0.74 U	0.098 U
Phenol	SW8270D	mg/kg dw	0.42	--	0.058 U	0.02 U	0.02 U	0.098 U	0.14 U	0.15 U	0.049 U
Other SVOCs - Organic Carbon Normalized											
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.33 U	0.56 U	1.2 U	0.58 U	8.1 U	8.4 U	0.47 UJ
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.33 U	0.56 U	1.2 U	0.58 U	8.1 U	8.4 U	0.97 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.33 U	0.56 U	1.2 U	0.58 U	8.1 U	8.4 U	0.97 U
Dibenzofuran	SW8270D	mg/kg-OC	--	--	3.3 U	1.9 U	4.2 U	8.7 U	8.1 U	8.4 U	0.97 U
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.33**	0.56 U	1.2 U	0.58 U	8.1 U	0.055 U	0.047 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.33 U	0.56 U	1.2 U	0.58 U	8.1 U	0.055 U	0.047 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	1.6 U	2.7 U	6.0 U	2.9 U	42 U	42 U	4.7 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	Off-Site Samples							
						SED-10	SED-11		SED-12	SED-18		SED-20
					LDW-SSB4A	SED-SS-10	SED-SS-11	SED-SS-11	SED-SS-12	SED-SC-18	SED-SC-18	SED-SC-20
					3/14/2005	5/24/2012	5/25/2012	5/25/2012	5/24/2012	6/1/2012	6/1/2012	6/1/2012
					LDW-SSB4A-010	SED-SS-10-052412	SED-SS-11-052512	DUP-052512-1	SED-SS-12-052412	SED-SC-18-0-1-060112	SED-SC-18-2-2.25-060112	SED-SC-20-0-1-060112
					0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 2.25 ft	0 - 1 ft
PAHs - Dry Weight												
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.044 U	**0.039**	**0.021**	**0.014** j	0.0031 U	**0.077**	**0.034**	**0.028**
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	**0.081**	0.0057 U	0.0056 U	0.0055 U	0.0055 U	**0.015** j	**0.024**	**0.019**
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.08**	**0.037**	**0.051**	**0.033**	**0.026**	**0.073**	**0.12**	**0.085**
Fluorene	SW8270D	mg/kg dw	0.54	--	0.044 U	**0.046**	**0.028**	**0.022**	**0.014** j	**0.072**	**0.054**	**0.03**
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.045**	**0.02**	**0.024**	**0.016** j	**0.047**	**0.049**	**0.045**	**0.044**
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.22**	**0.16**	**0.12**	**0.092**	**0.058**	**0.22**	**0.21**	**0.27**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.27**	**0.083**	**0.12**	**0.086**	**0.068**	**0.16**	**0.26**	**0.24**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.44**	**0.066**	**0.12**	**0.084**	**0.058**	**0.14**	**0.21**	**0.34**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.13**	**0.042**	**0.097**	**0.059**	**0.044**	**0.092**	**0.12**	**0.22**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.47**	**0.12**	**0.21**	**0.14**	**0.11**	**0.25**	**0.44**	**0.39**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	0.044 U	**0.014**	**0.026**	**0.02**	**0.015**	**0.043**	**0.058**	**0.1**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.57**	**0.22**	**0.29**	**0.21**	**0.13**	**0.43**	**0.8**	**0.5**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.2**	**0.037**	**0.077**	**0.049**	**0.035**	**0.082**	**0.12**	**0.2**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.54**	**0.17**	**0.25**	**0.17**	**0.13**	**0.36**	**0.72**	**0.8**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.84**	**0.17**	**0.32**	**0.21**	**0.15**	**0.36**	**0.52**	**0.78**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.044 U	**0.016** j	**0.02**	**0.014** j	**0.0096** j	**0.027**	**0.023**	**0.03**
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**2.22**	**0.49**	**0.873**	**0.589**	**0.436**	**1.035**	**1.608**	**2.05**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	NR	**0.10**	**0.18**	**0.13**	**0.09**	**0.22**	**0.33**	**0.51**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.58**	**0.10**	**0.18**	**0.13**	**0.09**	**0.22**	**0.33**	**0.51**
PAHs - Organic Carbon Normalized												
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	2.4 U	**2.0**	**0.32**	**0.13** j	0.13 U	**3.3**	**1.2**	**1.3**
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	**4.5**	0.30 U	0.086 U	0.052 U	0.24 U	**0.65** j	**0.87**	**0.87**
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**4.4**	**1.9**	**0.78**	**0.31**	**1.1**	**3.2**	**4.3**	**3.9**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	2.4 U	**2.4**	**0.43**	**0.21**	**0.60** j	**3.1**	**2.0**	**1.4**
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**2.5**	**1.0**	**0.37**	**0.15** j	**2.0**	**2.1**	**1.6**	**2.0**
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**12**	**8.3**	**1.8**	**0.87**	**2.5**	**9.5**	**7.6**	**12**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**15**	**4.3**	**1.8**	**0.81**	**2.9**	**6.9**	**9.4**	**11**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**24**	**3.4**	**1.8**	**0.79**	**2.5**	**6.1**	**7.6**	**16**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**7.1**	**2.2**	**1.5**	**0.56**	**1.9**	**4.0**	**4.3**	**10**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**26**	**6.3**	**3.2**	**1.3**	**4.7**	**11**	**16**	**18**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	2.4 U	**0.73**	**0.40**	**0.19**	**0.65**	**1.9**	**2.1**	**4.6**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**31**	**11**	**4.4**	**2.0**	**5.6**	**19**	**29**	**23**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**11**	**1.9**	**1.2**	**0.46**	**1.5**	**3.5**	**4.3**	**9.2**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**30**	**8.9**	**3.8**	**1.6**	**5.6**	**16**	**26**	**37**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**46**	**8.9**	**4.9**	**2.0**	**6.5**	**16**	**19**	**36**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	2.4 U	**0.83** j	**0.31**	**0.13** j	**0.41** j	**1.2**	**0.83**	**1.4**
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**28**	**16**	**3.7**	**1.7**	**6.3**	**22**	**18**	**22**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**190**	**48**	**23**	**10**	**32**	**83**	**118**	**164**
Other SVOCs - Dry Weight												
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.042 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	**0.0034** j	0.0018 U	**0.0024** j
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	0.042 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.001 U	0.0011 U	**0.0047**
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	0.042 U	0.0012 U	**0.0028** j	0.0011 U	0.0011 U	**0.004** j	**0.0043** j	**0.0082**
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	0.024 UJ	**0.0034** j	**0.0062** j	0.0028 U	**0.0038** j	**0.0042** j	**0.0044** j	**0.007** j
Benzoic acid	SW8270D	mg/kg dw	0.65	--	0.42 U	**0.23** j	**0.53**	**0.23** j	**0.34** j	**0.35** j	**0.64**	**0.33** j
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	0.044 U	**0.18**	**0.33**	**0.18**	**0.28**	**0.28**	**0.29**	**0.092**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	0.044 U	**0.033**	**0.028**	**0.017** j	**0.012** j	**0.065**	**0.036**	**0.03**
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	**0.0021** JN	0.0013 U	0.0012 U	0.0012 U	0.0012 U	**0.007**	0.0012 U	0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00097 U	0.00095 U	0.00094 U	0.00093 U	0.00092 U	0.00091 U	0.00093 U	0.00088 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.21 U	0.0014 U	0.0014 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	0.042 U	0.0018 U	**0.013**	0.0017 U	0.0017 U	0.0017 U	0.0018 U	**0.0053**
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	0.044 U	**0.014** j	**0.028** j	**0.013** j	**0.015** j	**0.02** j	**0.029** j	**0.024** j
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	**0.41**	0.014 U	0.014 U	0.014 U	0.014 U	0.013 U	0.014 U	**0.033** j
Phenol	SW8270D	mg/kg dw	0.42	--	0.051 U	**0.044**	**0.36**	0.0084 U	**0.033**	**0.043**	**0.091**	**0.082**
Other SVOCs - Organic Carbon Normalized												
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	2.3 U	0.094 U	0.028 U	0.017 U	0.078 U	**0.15** j	0.065 U	**0.11** j
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	2.3 U	0.057 U	0.017 U	0.010 U	0.047 U	0.043 U	0.040 U	**0.22**
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	2.3 U	0.063 U	**0.043** j	0.010 U	0.047 U	**0.17** j	**0.16** j	**0.38**
Dibenzofuran	SW8270D	mg/kg-OC	--	--	2.4 U	**1.7**	**0.43**	**0.16** j	**0.52** j	**2.8**	**1.3**	**1.4**
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.12** JN	0.068 U	0.018 U	0.011 U	0.052 U	**0.30**	0.043 U	0.055 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.053 U	0.049 U	0.014 U	0.009 U	0.040 U	0.039 U	0.034 U	0.040 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	12 U	0.073 U	0.021 U	0.012 U	0.056 U	0.056 U	0.047 U	0.060 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Toxicity Equivalency Factor	Off-Site Samples			
					SED-20	SED-21		
					SED-SC-20	SED-SC-21	SED-SC-21	SED-SC-21
					6/1/2012	5/25/2012	5/25/2012	5/25/2012
					SED-SC-20-2-2.5-060112	SED-SC-21-0-1-052512	SED-SC-21-2-4-052512	SED-SC-21-6-8-052512
					2 - 2.5 ft	0 - 1 ft	2 - 4 ft	6 - 8 ft
PAHs - Dry Weight								
Acenaphthene	SW8270D	mg/kg dw	0.500	--	0.003 U	**0.015** j	0.0033 U	**0.016** j
Acenaphthylene	SW8270D	mg/kg dw	1.30	--	0.0053 U	0.0055 U	0.0057 U	0.0054 U
Anthracene	SW8270D	mg/kg dw	0.96	--	**0.025**	**0.041**	**0.022**	**0.039**
Fluorene	SW8270D	mg/kg dw	0.54	--	**0.011** j	**0.027**	**0.012** j	**0.018** j
Naphthalene	SW8270D	mg/kg dw	2.10	--	**0.016** j	**0.014** j	**0.013** j	**0.023**
Phenanthrene	SW8270D	mg/kg dw	1.50	--	**0.078**	**0.12**	**0.054**	**0.14**
Benzo(a)anthracene [1]	SW8270D	mg/kg dw	1.30	0.1	**0.068**	**0.1**	**0.065**	**0.14**
Benzo(a)pyrene [1]	SW8270D	mg/kg dw	1.60	1	**0.074**	**0.087**	**0.066**	**0.18**
Benzo(g,h,i)perylene	SW8270D	mg/kg dw	0.670	--	**0.053**	**0.058**	**0.049**	**0.12**
Chrysene [1]	SW8270D	mg/kg dw	1.40	0.01	**0.092**	**0.22**	**0.1**	**0.2**
Dibenzo(a,h)anthracene [1]	SW8270D-SIM	mg/kg dw	0.230	0.4	**0.022**	**0.024**	**0.014**	**0.039**
Fluoranthene	SW8270D	mg/kg dw	1.70	--	**0.15**	**0.26**	**0.15**	**0.3**
Indeno(1,2,3-cd)pyrene [1]	SW8270D	mg/kg dw	0.600	0.1	**0.046**	**0.05**	**0.043**	**0.11**
Pyrene	SW8270D	mg/kg dw	2.60	--	**0.22**	**0.2**	**0.14**	**0.46**
Total (B+J+K) Benzofluoranthenes [1]	SW8270D	mg/kg dw	3.2	0.1	**0.17**	**0.22**	**0.17**	**0.44**
2-Methylnaphthalene	SW8270D	mg/kg dw	0.670	--	0.0028 U	**0.014** j	0.003 U	**0.011** j
Sum of Carcinogenic PAHs (ND = 0) [1]	--	mg/kg dw	NS	--	**0.472**	**0.701**	**0.458**	**1.109**
Carcinogenic PAH TEQ (ND = 0) [2]	--	mg/kg dw	0.09	--	**0.11**	**0.14**	**0.10**	**0.27**
Carcinogenic PAH TEQ (ND = 1/2 DL) [2]	--	mg/kg dw	0.09	--	**0.11**	**0.14**	**0.10**	**0.27**
PAHs - Organic Carbon Normalized								
Acenaphthene [3]	SW8270D	mg/kg-OC	16	--	0.18 U	**0.12** j	0.078 U	**0.13** j
Acenaphthylene [3]	SW8270D	mg/kg-OC	66	--	0.32 U	0.044 U	0.13 U	0.045 U
Anthracene [3]	SW8270D	mg/kg-OC	220	--	**1.5**	**0.33**	**0.52**	**0.32**
Fluorene [3]	SW8270D	mg/kg-OC	23	--	**0.66** j	**0.22**	**0.28** j	**0.15** j
Naphthalene [3]	SW8270D	mg/kg-OC	99	--	**0.96** j	**0.11** j	**0.31** j	**0.19**
Phenanthrene [3]	SW8270D	mg/kg-OC	100	--	**4.7**	**0.96**	**1.3**	**1.2**
Benzo(a)anthracene [4]	SW8270D	mg/kg-OC	110	--	**4.1**	**0.80**	**1.5**	**1.2**
Benzo(a)pyrene [4]	SW8270D	mg/kg-OC	99	--	**4.5**	**0.70**	**1.6**	**1.5**
Benzo(g,h,i)perylene [4]	SW8270D	mg/kg-OC	31	--	**3.2**	**0.46**	**1.2**	**0.99**
Chrysene [4]	SW8270D	mg/kg-OC	110	--	**5.5**	**1.8**	**2.4**	**1.7**
Dibenzo(a,h)anthracene [4]	SW8270D-SIM	mg/kg-OC	12	--	**1.3**	**0.19**	**0.33**	**0.32**
Fluoranthene [4]	SW8270D	mg/kg-OC	160	--	**9.0**	**2.1**	**3.5**	**2.5**
Indeno(1,2,3-cd)pyrene [4]	SW8270D	mg/kg-OC	34	--	**2.8**	**0.40**	**1.0**	**0.91**
Pyrene [4]	SW8270D	mg/kg-OC	1,000	--	**13**	**1.6**	**3.3**	**3.8**
Total (B+J+K) Benzofluoranthenes [4]	SW8270D	mg/kg-OC	230	--	**10**	**1.8**	**4.0**	**3.6**
2-Methylnaphthalene	SW8270D	mg/kg-OC	38	--	0.17 U	**0.11** j	0.071 U	**0.091** j
Total LPAH (ND = 0) [3]	SW8270D	mg/kg-OC	370	--	**7.8**	**1.7**	**2.4**	**2.0**
Total HPAH (ND = 0) [4]	SW8270D	mg/kg-OC	960	--	**54**	**10**	**19**	**16**
Other SVOCs - Dry Weight								
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg dw	0.031	--	0.0017 U	0.0018 U	0.0018 U	0.0018 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.036	--	**0.0027** j	0.0011 U	0.0011 U	0.001 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg dw	0.110	--	**0.003** j	0.0011 U	0.0012 U	**0.003** j
2,4-Dimethylphenol	SW8270D-SIM	mg/kg dw	0.029	--	**0.0054** j	0.0028 U	0.0029 U	**0.0032** j
Benzoic acid	SW8270D	mg/kg dw	0.65	--	**0.28** j	**0.16** j	**0.16** j	**0.17** j
Benzyl alcohol	SW8270D-SIM	mg/kg dw	0.057	--	**0.065**	**0.16**	**0.14**	**0.075**
Dibenzofuran	SW8270D	mg/kg dw	0.54	--	**0.016** j	**0.017** j	0.0041 U	**0.016** j
Hexachlorobenzene	SW8270D-SIM	mg/kg dw	0.022	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg dw	0.011	--	0.00089 U	0.00092 U	0.00095 U	0.00091 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg dw	0.028	--	0.0013 U	0.0013 U	0.0014 U	0.0013 U
o-Cresol (2-methylphenol)	SW8270D-SIM	mg/kg dw	0.063	--	**0.0045** j	0.0017 U	0.0018 U	**0.0028** j
p-Cresol (4-methylphenol)	SW8270D	mg/kg dw	0.67	--	**0.02** j	**0.014** j	**0.014** j	**0.021** j
Pentachlorophenol	SW8270D-SIM	mg/kg dw	0.36	--	0.013 U	0.014 U	0.014 U	0.014 U
Phenol	SW8270D	mg/kg dw	0.42	--	**0.064**	**0.039**	**0.023**	**0.057**
Other SVOCs - Organic Carbon Normalized								
1,2,4-Trichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.10 U	0.014 U	0.042 U	0.015 U
1,2-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.16** j	0.009 U	0.026 U	0.008 U
1,4-Dichlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	**0.18** j	0.009 U	0.028 U	**0.025** j
Dibenzofuran	SW8270D	mg/kg-OC	--	--	**0.96** j	**0.14** j	0.097 U	**0.13** j
Hexachlorobenzene	SW8270D-SIM	mg/kg-OC	--	--	0.072 U	0.010 U	0.028 U	0.010 U
Hexachlorobutadiene	SW8270D-SIM	mg/kg-OC	--	--	0.054 U	0.007 U	0.022 U	0.008 U
n-Nitrosodiphenylamine	SW8270D-SIM	mg/kg-OC	--	--	0.078 U	0.010 U	0.033 U	0.011 U

PUBLIC REVIEW DRAFT
Table GG-2
Sediment Analytical Results Summary - Semivolatile Organic Compounds & Polycyclic Aromatic Hydrocarbons
5900 West Marginal Way Site
Seattle, Washington

Notes:
-- = No value available
Empty cells = Not analyzed.
ND=1/2DL = Non-detect values calculated as one-half the laboratory detection limit.

[1] *= Sum of Carcinogenic PAHs: Benzo(a)anthracene, Benzo(a)pyrene, Chrysene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, total (B+J+K) Benzofluoranthenes, where non-detected carcinogenic PAH compounds are equal to zero.*

[2] *= Toxicity Equivalency Quotient calculations for cPAHs (WAC 173-340-200; 173-340-900, Table 708-2) using benzo(a)pyrene as the reference chemical. If all compounds non-detect, then detection limit equal to maximum detection limit (modified by chemical's toxicity factor).*

[3] = LPAH compounds: naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, and anthracene.

[4] = HPAH compounds: fluoranthene, pyrene, benz[a]anthracene, chrysene, total benzofluoranthenes, benzo[a]pyrene, benzo[g,h,i]perylene, indeno[1,2,3-c,d]pyrene, and dibenzo[a,h]anthracene.

Bold *text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.
All depths below mudline.

Key:
cm = centimeters
DUP = field duplicate sample
dw = dry weight
ft = feet
LDW = Lower Duwamish Waterway
mg/kg = milligrams per kilogram
OC = organic carbon normalized
PAH = polycyclic aromatic hydrocarbon
NA = not available, no screening value calculated
NR = not reported
SC = sediment core sample
SED = sediment sample
SVOC = semi-volatile organic compound

Data Qualifiers:
- = Compound concentration biased low
+ = Compound concentration biased high
J = Detected compound qualified as estimated
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.

JN = TIC has been identified as CAS RN.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.
UJ = Non-detected compound qualified as estimated.

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples							
				SED-01				SED-02			
				SED-SS-01	SED-SC-01	SED-SC-01	SED-SC-01	SED-SS-02	SED-SC-02	SED-SC-02	SED-SC-02
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012
				SED-SS-01-052212	SED-SC-01-0-1-053012	SED-SC-01-2-4-053012	DUP-053012-4	SED-SS-02-052312	SED-SC-02-0-1-052912	SED-SC-02-2-4-052912	SED-SC-02-6-8-052912
				0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft
Phthalate Esters - Dry Weight											
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.1**	**0.034**	**0.027**	**0.021**	**0.027**	**0.026**	**0.0029** j	**0.004** j
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.52**	**0.34**	0.088 U	0.15 U	**0.2**	0.18 U	0.044 U	0.079 U
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.008 U	**0.025**	**0.015** j	0.0073 U	**0.02**	**0.012** j	0.0076 U	**0.015** j
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.014 U	**0.053**	0.013 U	0.012 U	0.016 U	**0.022**	**0.042**	**0.025**
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0059**	**0.0055**	0.0012 U	0.0012 U	**0.0079**	**0.009**	0.0012 U	**0.0024** j
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0057 U	0.0053 U	0.0054 U	**0.04**	0.0057 U	0.0056 U	0.0054 U	0.0055 U
Phthalate Esters - Organic Carbon Normalized											
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**4.1**	**1.6**	**3.0**	**2.0**	**1.0**	**1.1**	**0.47** j	**0.21** j
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**21**	**16**	9.9 U	14 U	**7.7**	7.5 U	7.1 U	4.1 U
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.33 U	**1.2**	**1.7** j	0.69 U	**0.77**	**0.50** j	1.2 U	**0.79** j
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	0.57 U	**2.5**	1.5 U	1.1 U	0.62 U	**0.92**	**6.8**	**1.3**
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.24**	**0.26**	0.13 U	0.11 U	**0.30**	**0.38**	0.19 U	**0.13** j

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples					On-Site Samples			
				SED-03					SED-04			
				SED-SS-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SS-04	SED-SC-04	SED-SC-04	SED-SC-04
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012
				SED-SS-03-052212	SED-SC-03-0-1-053012	SED-SC-03-2-4-053012	DUP-053012-3	SED-SC-03-6-8-053012	SED-SS-04-052212	SED-SC-04-0-1-053012	SED-SC-04-2-4-053012	SED-SC-04-6-7.1-053012
				0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 7.1 ft
Phthalate Esters - Dry Weight												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.025**	**0.006**	**0.0031** j	**0.0054**	0.0027 U	**0.0086**	0.0027 U	0.0027 U	0.0027 U
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.2**	0.098 U	0.05 U	0.014 U	0.014 U	**0.08**	0.014 U	0.014 U	0.045 U
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0078 U	**0.35**	**0.034**	**0.046**	0.0077 U	0.0079 U	0.0076 U	0.0077 U	0.0076 U
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.028 U	**0.052**	0.018 U	0.018 U	0.034 U	0.051 U	**0.0047**	**0.0088**	**0.005**
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0081**	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**0.0034** j	**0.0038** j	0.0013 U	**0.0045** j
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0056 U	0.0056 U	0.0057 U	0.0056 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0055 U
Phthalate Esters - Organic Carbon Normalized												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.85**	**0.18**	**0.20** j	**0.25**	0.75 U	**0.39**	0.15 U	0.20 U	1.1 U
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**6.8**	3.0 U	3.3 U	0.64 U	3.9 U	**3.6**	0.77 U	1.0 U	18 U
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.27 U	**11**	**2.2**	**2.1**	2.1 U	0.36 U	0.42 U	0.57 U	3.0 U
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	0.96 U	**1.6**	1.2 U	0.82 U	9.4 U	2.3 U	**0.26**	**0.65**	**2.0**
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.28**	0.039 U	0.085 U	0.059 U	0.36 U	**0.15** j	**0.21** j	0.096 U	**1.8** j

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples								
				SED-05				SED-06				
				SED-SS-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SS-06	SED-SS-06	SED-SC-06	SED-SC-06	SED-SC-06
				5/23/2012	6/1/2012	6/1/2012	6/1/2012	5/23/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012
				SED-SS-05-052312	SED-SC-05-0-1-060112	SED-SC-05-2-4-060112	SED-SC-05-6-8-060112	SED-SS-06-052312	DUP-052312-1	SED-SC-06-0-1-052912	SED-SC-06-2-4-052912	SED-SC-06-6-8-052912
				0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft
Phthalate Esters - Dry Weight												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.02**	**0.017**	**0.027**	0.0027 U	**0.018**	**0.034**	**0.037**	**0.025**	**0.0088**
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.12**	**0.16**	**0.61**	**0.033**	**0.12**	**0.21**	**0.4**	**0.37**	**0.073**
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0079 U	0.008 U	0.0079 U	0.0076 U	0.0079 U	0.0078 U	**0.01** j	0.0077 U	0.008 U
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.044 U	0.012 U	0.025 U	0.019 U	0.013 U	0.012 U	0.0099 U	0.0062 U	0.016 U
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0084**	**0.017**	**0.02**	0.0013 U	**0.0042** j	**0.0043** j	**0.01**	0.0013 U	0.0013 U
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0057 U	0.0057 U	0.0057 U	0.0055 U	0.0057 U	0.0056 U	0.0056 U	0.0055 U	0.0057 U
Phthalate Esters - Organic Carbon Normalized												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.68**	**0.65**	**0.99**	0.76 U	**0.88**	**1.2**	**1.7**	**1.3**	**0.47**
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**4.1**	**6.1**	**22**	**9.3**	**5.9**	**7.3**	**18**	**19**	**3.9**
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.27 U	0.31 U	0.29 U	2.1 U	0.39 U	0.27 U	**0.46** j	0.39 U	0.42 U
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	1.5 U	0.46 U	0.91 U	5.4 U	0.64 U	0.42 U	0.45 U	0.32 U	0.85 U
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.28**	**0.65**	**0.73**	0.37 U	**0.21** j	**0.15** j	**0.46**	0.067 U	0.069 U

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples									
				SED-07				SED-08					
				SED-SS-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SS-08	SED-SS-08	SED-SC-08	SED-SC-08	SED-SC-08	
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012	
				SED-SS-07-052212	SED-SC-07-0-1-053012	SED-SC-07-2-4-053012	SED-SC-07-6-8-053012	SED-SS-08-052212	DUP-052212-1	SED-SC-08-0-1-053012	SED-SC-08-2-4-053012	DUP-053012-2	
				0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	
Phthalate Esters - Dry Weight													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.01**	**0.012**	**0.0034** j	**0.0031** j	**0.014**	**0.014**	**0.023**	**0.021**	**0.02**	
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.1**	0.16 U	0.097 U	0.014 U	**0.093**	**0.093**	**0.27**	**0.29**	**0.29**	
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0081 U	0.0079 U	**0.014** j	0.0077 U	0.008 U	0.0078 U	0.0078 U	**0.013** j	**0.01** j	
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.035 U	**0.0068**	**0.007**	**0.016**	0.0093 U	0.0074 U	0.026 U	0.021 U	0.014 U	
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0054**	**0.0071**	0.0013 U	**0.0065**	**0.0039** j	**0.0074**	**0.0094**	**0.0034** j	**0.006**	
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0058 U	0.0056 U	0.0055 U	0.0055 U	0.0057 U	0.0056 U	0.0056 U	0.0056 U	0.0055 U	
Phthalate Esters - Organic Carbon Normalized													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.34**	**0.53**	**0.18** j	**0.20** j	**0.49**	**0.48**	**1.2**	**1.3**	**1.0**	
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**3.4**	7.0 U	5.1 U	0.91 U	**3.2**	**3.2**	**14**	**18**	**15**	
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.28 U	0.35 U	**0.73** j	0.50 U	0.28 U	0.27 U	0.40 U	**0.79** j	**0.52** j	
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	1.2 U	**0.30**	**0.37**	**1.0**	0.32 U	0.26 U	1.3 U	1.3 U	0.73 U	
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.18**	**0.31**	0.068 U	**0.42**	**0.14** j	**0.26**	**0.48**	**0.21** j	**0.31**	

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples								
					SED-09				SED-13			
				SED-SC-08	SED-SS-09	SED-SC-09	SED-SC-09	SED-SC-09	SED-SS-13	SED-SC-13	SED-SC-13	SED-SC-13
				5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/23/2012	5/31/2012	5/31/2012	5/31/2012
				SED-SC-08-6-8-053012	SED-SS-09-052312	SED-SC-09-0-1-052912	SED-SC-09-2-4-052912	SED-SC-09-6-8-052912	SED-SS-13-052312	SED-SC-13-0-1-053112	SED-SC-13-2-4-053112	SED-SC-13-6-7-053112
				6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 7 ft
Phthalate Esters - Dry Weight												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.0038** j	**0.011**	**0.015**	**0.0099**	0.0028 U	**0.014**	**0.034**	**0.0052**	0.0027 U
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	0.046 U	**0.11**	0.042 U	0.045 U	0.014 U	**0.22**	**0.39**	0.11 U	0.014 U
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0077 U	0.008 U	0.0079 U	**0.021**	0.0079 U	0.008 U	**0.017** j	0.008 U	0.0076 U
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	**0.062**	0.0088 U	0.022 U	0.0094 U	0.0032 U	0.01 U	**0.044** j	0.04 U	0.017 U
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	0.0013 U	**0.0047** j	0.0013 U	0.0013 U	0.0013 U	**0.0085**	**0.0095**	0.0013 U	0.0012 U
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0055 U	0.0057 U	0.0057 U	0.0055 U	0.0057 U	0.0057 U	0.0056 U	0.0057 U	0.0054 U
Phthalate Esters - Organic Carbon Normalized												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.20** j	**0.41**	**0.67**	**0.38**	0.17 U	**0.52**	**1.5**	**0.35**	0.13 U
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	2.4 U	**4.1**	1.9 U	1.7 U	0.83 U	**8.1**	**18**	7.4 U	0.69 U
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.40 U	0.30 U	0.35 U	**0.80**	0.47 U	0.30 U	**0.77** j	0.54 U	0.38 U
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	**3.2**	0.33 U	0.98 U	0.36 U	0.19 U	0.37 U	**2.0** j	2.7 U	0.84 U
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	0.068 U	**0.17** j	0.058 U	0.049 U	0.077 U	**0.31**	**0.43**	0.09 U	0.059 U

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples					On-Site Samples				
				SED-14					SED-15				
				SED-SS-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SS-15	SED-SC-15	SED-SC-15	SED-SS-16	
				5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/31/2012	5/31/2012	5/22/2012	
				SED-SS-14-052312	SED-SC-14-0-1-052912	SED-SC-14-2-4-052912	SED-SC-14-6-8-052912	DUP-052912-2	SED-SS-15-052212	SED-SC-15-0-1-053112	SED-SC-15-2-4-053112	SED-SS-16-052212	
				0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	0 - 10 cm	
Phthalate Esters - Dry Weight													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.0031** j	**0.026**	**0.0091**	**0.0063**	0.0028 U	0.0027 U	**0.0098**	**0.0053**	**0.015**	
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.11**	**0.13**	**0.037**	**0.024**	0.014 U	**0.077**	**0.057**	0.013 U	**0.16**	
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0077 U	0.0079 U	0.0076 U	0.0077 U	0.0079 U	0.0076 U	0.0074 U	**0.029**	0.0077 U	
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.0097 U	0.0066 U	0.0064 U	**0.0044** j	0.014 U	0.0089 U	0.015 U	**0.038** j	**0.05**	
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	**0.0037** j	**0.0044** j	**0.003** j	**0.006**	
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0055 U	0.0056 U	0.0055 U	0.0055 U	0.0056 U	0.0055 U	0.0053 U	0.0054 U	0.0055 U	
Phthalate Esters - Organic Carbon Normalized													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.11** j	**1.3**	**0.63**	**0.17**	0.0966 U	0.12 U	**0.56**	**0.28**	**0.68**	
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**4.0**	**6.4**	**2.6**	**0.64**	0.48 U	**3.3**	**3.3**	0.69 U	**7.3**	
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.28 U	0.39 U	0.52 U	0.21 U	0.27 U	0.33 U	0.42 U	**1.5**	0.35 U	
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	0.35 U	0.33 U	0.44 U	**0.12** j	0.48 U	0.38 U	0.86 U	**2.0** j	**2.3**	
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	0.047 U	0.0644 U	0.090 U	0.035 U	0.045 U	**0.16** j	**0.25** j	**0.16** j	**0.27**	

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples									
				SED-16			SED-17					SED-18	SED-19
				SED-SC-16	SED-SC-16	SED-SC-16	SED-SS-17	SED-SC-17	SED-SC-17	SED-SC-17		SED-SS-18	SED-SS-19
				5/31/2012	5/31/2012	5/31/2012	5/23/2012	5/30/2012	5/30/2012	5/30/2012		5/23/2012	5/23/2012
				SED-SC-16-0-1-053112	SED-SC-16-2-3.5-053112	DUP-053112-2	SED-SS-17-052312	SED-SC-17-0-1-053012	SED-SC-17-2-4-053012	SED-SC-17-4-5-053012		SED-SS-18-052312	SED-SS-19-052312
				0 - 1 ft	2 - 3.5 ft	2 - 3.5 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-5 ft		0 - 10 cm	0 - 10 cm
Phthalate Esters - Dry Weight													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.047**	**0.16**	**0.0028** j	**0.013**	**0.03**	**0.0052**	**0.0047** J		**0.0098**	**0.074**
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.17**	**0.032**	**0.027**	**0.12**	0.16 U	0.075 U	**0.05**		**0.079**	**0.15**
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	**0.032**	**0.052**	**0.042**	0.0081 U	**0.014** j	**0.016** j	**0.071**		0.0079 U	0.0079 U
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.0087 U	0.014 U	0.0089 U	0.0096 U	0.015 U	0.032 U	0.036 U		0.016 U	0.044 U
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0058**	**0.0066**	**0.0088**	**0.0067**	**0.0089**	0.0012 U	0.0013 U		**0.0033** j	**0.0045** j
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0056 U	0.0056 U	0.0054 U	0.0058 U	0.0056 U	0.0054 U	0.0058 U		0.0057 U	0.0056 U
Phthalate Esters - Organic Carbon Normalized													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**2.3**	**7.4**	**0.12** j	**0.39**	**1.3**	**0.34**			**0.29**	**2.6**
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**8.2**	**1.5**	**1.2**	**3.6**	7.0 U	4.9 U			**2.3**	**5.2**
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	**1.5**	**2.4**	**1.8**	0.24 U	**0.62** j	**1.1** j			0.23 U	0.27 U
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	0.42 U	0.65 U	0.38 U	0.29 U	0.66 U	2.1 U			0.47 U	1.5 U
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.28**	**0.30**	**0.38**	**0.20**	**0.39**	0.079 U			**0.096** j	**0.16** j

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples																	
				SED-22																	
				SED-SS-22		B4A		DR122		DR124		LDW-SC29		LDW-SC29		LDW-SC29		LDW-SS56		LDW-SS57	
				5/23/2012		8/15/2004		9/14/1998		9/15/1998		2/21/2006		2/21/2006		2/21/2006		1/24/2005		1/24/2005	
				SED-SS-22-052312		LDW-B4A-S		SD-DR122-0000		SD-DR124-0000		LDW-SC29-0-1		LDW-SC29-1-2		LDW-SC29-2-3.6		LDW-SS56-010		LDW-SS57-010	
				0 - 10 cm		0 - 10 cm		0 - 10 cm		0 - 10 cm		0 - 1 ft		1 - 2 ft		2 - 3.6 ft		0 - 10 cm		0 - 10 cm	
Phthalate Esters - Dry Weight																					
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.0046**	j	**0.021**		**0.07**		**0.1**		**0.0059**		0.0059	U	0.0058	U	0.0065	U	0.14	U
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.041**		**0.14**	J	**0.56**		**0.94**		**0.04**	J	0.02	U	0.02	U	**0.21**		**0.29**	
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0076	U	**0.016**	J	0.02	U	**0.02**		**0.062**		**0.028**		**0.022**		0.098	U	0.14	U
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	**0.0064**		0.02	U	0.02	U	0.02	U	0.058	U	0.02	U	0.02	U	0.0065	U	0.14	U
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0025**	j	0.02	U	**0.02**		0.02	U	0.058	U	0.02	U	0.02	U	0.0065	U	0.14	U
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0054	U	0.04	U	0.02	U	0.02	U	0.058	U	0.02	U	0.02	U	0.098	U	0.14	U
Phthalate Esters - Organic Carbon Normalized																					
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.27**	j	**1.1**		**3.2**		**3.6**		**0.33**		0.56	U	1.2	U	0.58	U	8.1	U
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**2.4**		**7.1**	J	**26**		**34**		**2.3**	J	1.9	U	4.2	U	**19**		**17**	
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.45	U	**0.82**	J	0.92	U	**0.72**		**3.5**		**2.6**		**4.6**		8.7	U	8.1	U
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	**0.38**		1.0	U	0.92	U	0.72	U	3.3	U	1.9	U	4.2	U	0.58	U	8.1	U
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.15**	j	1.0	U	**0.92**		0.72	U	3.3	U	1.9	U	4.2	U	0.58	U	8.1	U

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	On-Site Samples			Off-Site Samples					
							SED-10	SED-11		SED-12	SED-18	
				LDW-SS58	LDW-SS59	LDW-SSB4A	SED-SS-10	SED-SS-11	SED-SS-11	SED-SS-12	SED-SC-18	SED-SC-18
				1/24/2005	3/14/2005	3/14/2005	5/24/2012	5/25/2012	5/25/2012	5/24/2012	6/1/2012	6/1/2012
				LDW-SS58-010	LDW-SS59R2-010	LDW-SSB4A-010	SED-SS-10-052412	SED-SS-11-052512	DUP-052512-1	SED-SS-12-052412	SED-SC-18-0-1-060112	SED-SC-18-2-2.25-060112
				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 2.25 ft
Phthalate Esters - Dry Weight												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	0.15 U	**0.08**	0.042 U	**0.0089**	**0.015**	**0.013**	**0.0081**	**0.018**	**0.018**
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.28**	**0.53**	**0.17**	**0.1**	**0.32**	0.16 U	**0.14**	**0.18**	**0.23**
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.15 U	0.02 U	0.044 U	0.0081 U	0.008 U	0.0079 U	0.0078 U	0.0077 U	**0.018** j
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.15 U	0.02 U	0.042 U	0.0032 U	0.0032 U	**0.0066**	0.0097 U	0.013 U	0.011 U
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	0.15 U	0.02 U	0.042 U	**0.0055**	**0.0059**	**0.0046** j	**0.0048**	**0.0054**	**0.0062**
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.15 U	0.02 U	0.044 U	0.0058 U	0.0057 U	0.0056 U	0.0056 U	0.0055 U	0.0057 U
Phthalate Esters - Organic Carbon Normalized												
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	8.4 U	**3.9**	2.3 U	**0.46**	**0.23**	**0.12**	**0.35**	**0.78**	**0.65**
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**16**	**26**	**9.3**	**5.2**	**4.9**	1.5 U	**6.0**	**7.8**	**8.3**
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	8.4 U	0.97 U	2.4 U	0.42 U	0.12 U	0.075 U	0.34 U	0.33 U	**0.65** j
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	8.4 U	0.97 U	2.3 U	0.17 U	0.049 U	**0.062**	0.42 U	0.56 U	0.40 U
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	8.4 U	0.97 U	2.3 U	**0.29**	**0.090**	**0.043** j	**0.21**	**0.23**	**0.22**

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Screening Level	Off-Site Samples									
				SED-20				SED-21					
				SED-SC-20		SED-SC-20		SED-SC-21		SED-SC-21		SED-SC-21	
				6/1/2012		6/1/2012		5/25/2012		5/25/2012		5/25/2012	
				SED-SC-20-0-1-060112		SED-SC-20-2-2.5-060112		SED-SC-21-0-1-052512		SED-SC-21-2-4-052512		SED-SC-21-6-8-052512	
				0 - 1 ft		2 - 2.5 ft		0 - 1 ft		2 - 4 ft		6 - 8 ft	
Phthalate Esters - Dry Weight													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg dw	0.0630	**0.039**		**0.011**		**0.026**		**0.0099**		**0.018**	
Bis[2-ethylhexyl]phthalate (Di-sec octyl phthalate)	SW8270D	mg/kg dw	1.3	**0.62**		**0.17**		**0.42**		0.12	U	0.28	U
Dibutyl phthalate	SW8270D	mg/kg dw	1.40	0.0075	U	0.0075	U	0.0078	U	0.0081	U	**0.014**	j
Diethyl phthalate	SW8270D-SIM	mg/kg dw	0.200	0.0076	U	0.01	U	0.0031	U	0.0032	U	**0.0065**	
Dimethylphthalate	SW8270D-SIM	mg/kg dw	0.071	**0.0096**		**0.013**		**0.0083**		**0.0031**	j	**0.0056**	
Di-n-octyl phthalate	SW8270D	mg/kg dw	6.20	0.0053	U	0.0054	U	0.0056	U	0.0058	U	0.0056	U
Phthalate Esters - Organic Carbon Normalized													
Benzyl butyl phthalate	SW8270D-SIM	mg/kg-OC	--	**1.8**		**0.66**		**0.21**		**0.23**		0.15	U
Bis[2-ethylhexyl]phthalate	SW8270D	mg/kg-OC	--	**28**		**10**		**3.4**		2.8	U	2.3	U
Dibutyl phthalate (Di-n-butyl phthalate)	SW8270D	mg/kg-OC	--	0.34	U	0.45	U	0.062	U	0.19	U	**0.12**	j
Diethyl phthalate	SW8270D-SIM	mg/kg-OC	--	0.35	U	0.60	U	0.025	U	0.075	U	**0.054**	
Dimethylphthalate	SW8270D-SIM	mg/kg-OC	--	**0.44**		**0.78**		**0.066**		**0.073**	j	**0.046**	

PUBLIC REVIEW DRAFT
Table GG-3
Sediment Analytical Results Summary - Phthalate Esters
5900 West Marginal Way Site
Seattle, Washington

Notes:
-- = No value available
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Light gray-shaded values indicate that the method detection limit exceeds the screening level.
All depths below mudline.

Key:
DUP = duplicate field sample
dw = dry weight
ft = feet
mg/kg = milligrams per kilogram
OC = organic carbon normalized
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SQS = sediment quality standards (WAC 173-204-320)
SS = surface sediment sample

Data Qualifiers:
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
J = Detected compound qualified as estimated.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples								
				SED-01				SED-02				
			Screening Level	SED-SS-01	SED-SC-01	SED-SC-01	SED-SC-01	SED-SS-02	SED-SC-02	SED-SC-02	SED-SC-02	SED-SC-02
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012
				SED-SS-01-052212	SED-SC-01-0-1-053012	SED-SC-01-2-4-053012	DUP-053012-4	SED-SS-02-052312	SED-SC-02-0-1-052912	SED-SC-02-2-4-052912	SED-SC-02-6-8-052912	SED-SC-02-8-10-05291
				0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	8 - 10 ft
PCBs - Dry Weight												
Aroclor 1016	SW8082	mg/kg dw	NS	0.0049 U	0.00096 U	0.00097 U	0.00095 U	0.001 U	0.001 U	0.00097 U	0.0097 U	0.00095 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0014 U	0.0013 U	0.013 U	0.0013 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0014 U	0.0013 U	0.013 U	0.0013 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0014 U	0.0013 U	0.013 U	0.0013 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.02**	**0.018**	**0.0058**	**0.0058**	**0.042**	**0.13**	**0.036**	**0.25**	**0.045**
Aroclor 1254	SW8082	mg/kg dw	NS	**0.042**	**0.04**	**0.014**	**0.014**	**0.10**	**0.19**	**0.035**	**0.36**	**0.14**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.024**	**0.034**	**0.011**	**0.014**	**0.047**	**0.094**	**0.015**	**0.16**	**0.071**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.086**	**0.092**	**0.031**	**0.034**	**0.19**	**0.41**	**0.086**	**0.77**	**0.26**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.089**	**0.093**	**0.031**	**0.034**	**0.19**	**0.41**	**0.087**	**0.78**	**0.26**
PCBs - Organic Carbon Normalized												
Aroclor 1016	SW8082	mg/kg-OC	--	0.20 U	0.0453 U	0.11 U	0.0896 U	0.0385 U	0.0417 U	0.16 U	0.51 U	0.08 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.27 U	0.0613 U	0.15 U	0.12 U	0.0500 U	0.0583 U	0.21 U	0.68 U	0.10 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.27 U	0.0613 U	0.15 U	0.12 U	0.0500 U	0.0583 U	0.21 U	0.68 U	0.10 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.27 U	0.0613 U	0.15 U	0.12 U	0.0500 U	0.0583 U	0.21 U	0.68 U	0.10 U
Aroclor 1248	SW8082	mg/kg-OC	--	**0.82**	**0.85**	**0.65**	**0.55**	**1.6**	**5.4**	**5.8**	**13**	**3.6**
Aroclor 1254	SW8082	mg/kg-OC	--	**1.7**	**1.9**	**1.6**	**1.3**	**3.8**	**7.9**	**5.6**	**19**	**11**
Aroclor 1260	SW8082	mg/kg-OC	--	**0.98**	**1.6**	**1.2**	**1.3**	**1.8**	**3.9**	**2.4**	**8.4**	**5.7**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**3.5**	**4.3**	**3.4**	**3.2**	**7.3**	**17**	**14**	**40**	**21**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**3.6**	**4.4**	**3.5**	**3.2**	**7.3**	**17**	**14**	**41**	**21**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples										
				SED-03						SED-04				
			Screening Level	SED-SS-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SS-04	SED-SC-04	SED-SC-04	SED-SC-04	SED-SC-04
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012
				SED-SS-03-052212	SED-SC-03-0-1-053012	SED-SC-03-2-4-053012	DUP-053012-3	SED-SC-03-4-6-053012	SED-SC-03-6-8-053012	SED-SS-04-052212	SED-SC-04-0-1-053012	SED-SC-04-1-2-053012	SED-SC-04-2-4-053012	SED-SC-04-6-7.1-053012
				0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft	6 - 7.1 ft
PCBs - Dry Weight														
Aroclor 1016	SW8082	mg/kg dw	NS	0.001 U	0.0049 U	0.00097 U	0.001 U	0.00096 U	0.00096 U	0.00098 U	0.005 U	0.0049 U	0.00099 U	0.00096 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0013 U	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0066 U	0.0065 U	0.0013 U	0.0013 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0013 U	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0066 U	0.0065 U	0.0013 U	0.0013 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0013 U	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0066 U	0.0065 U	0.0013 U	0.0013 U
Aroclor 1248	SW8082	mg/kg dw	NS	0.0013 U	**0.32**	**0.061** J	**0.043**	**0.0098**	0.0013 U	0.0013 U	0.0066 U	**0.0065**	**0.0067**	0.0013 U
Aroclor 1254	SW8082	mg/kg dw	NS	**0.1**	**0.54**	**0.12** J	**0.088**	**0.018**	0.0013 U	**0.07**	**0.31**	**0.17**	**0.0099**	0.0013 U
Aroclor 1260	SW8082	mg/kg dw	NS	**0.035**	**0.14**	**0.1** J	**0.071**	**0.0089**	0.0013 U	**0.036**	**0.22**	**0.086**	0.0013 U	0.0013 U
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.14**	**1.0**	**0.28**	**0.20**	**0.037**	**0**	**0.11**	**0.53**	**0.26**	**0.017**	**0**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.14**	**1.0**	**0.28**	**0.20**	**0.037**	**0.0046**	**0.11**	**0.54**	**0.27**	**0.019**	**0.0046**
PCBs - Organic Carbon Normalized														
Aroclor 1016	SW8082	mg/kg-OC	--	0.034 U	0.15 U	0.063 U	0.045 U	0.06 U	0.27 U	0.044 U	0.27 U	0.27 U	0.073 U	0.38 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.044 U	0.20 U	0.085 U	0.059 U	0.08 U	0.36 U	0.059 U	0.36 U	0.35 U	0.096 U	0.52 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.044 U	0.20 U	0.085 U	0.059 U	0.08 U	0.36 U	0.059 U	0.36 U	0.35 U	0.096 U	0.52 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.044 U	0.20 U	0.085 U	0.059 U	0.08 U	0.36 U	0.059 U	0.36 U	0.35 U	0.096 U	0.52 U
Aroclor 1248	SW8082	mg/kg-OC	--	0.044 U	**9.7**	**4.0** J	**2.0**	**0.57**	0.36 U	0.059 U	0.36 U	**0.35**	**0.49**	0.52 U
Aroclor 1254	SW8082	mg/kg-OC	--	**3.4**	**16**	**7.8** J	**4.0**	**1.0**	0.36 U	**3.2**	**17**	**9.2**	**0.73**	0.52 U
Aroclor 1260	SW8082	mg/kg-OC	--	**1.2**	**4.2**	**6.5** J	**3.2**	**0.51**	0.36 U	**1.6**	**12**	**4.7**	0.096 U	0.52 U
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**4.6**	**30**	**18**	**9.2**	**2.1**	**0.00**	**4.8**	**29**	**14**	**1.2**	**0.00**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**4.8**	**30**	**18**	**9.1**	**2.1**	**1.3**	**5.0**	**30**	**15**	**1.4**	**1.8**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples											
				SED-05					SED-06						
			Screening Level	SED-SS-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SS-06	SED-SS-06	SED-SC-06	SED-SC-06	SED-SC-06	SED-SC-06
				5/23/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/23/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012
				SED-SS-05-052312	SED-SC-05-0-1-060112	SED-SC-05-2-4-060112	SED-SC-05-4-6-060112	SED-SC-05-6-8-060112	SED-SS-06-052312	DUP-052312-1	SED-SC-06-0-1-052912	SED-SC-06-2-4-052912	SED-SC-06-6-8-052912	SED-SC-06-8-10-052912
				0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	8-10 ft
PCBs - Dry Weight														
Aroclor 1016	SW8082	mg/kg dw	NS	0.001 U	0.001 U	0.019 U	0.00097 U	0.00095 U	0.00098 U	0.001 U	0.00098 U	0.0095 U	0.0095 U	0.00099 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0014 U	0.0014 U	0.025 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.013 U	0.0013 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0014 U	0.0014 U	0.025 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.013 U	0.0013 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0014 U	0.0014 U	0.025 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.013 U	0.0013 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.024**	**0.031**	0.025 U	**0.0013**	0.0013 U	**0.029**	**0.035**	**0.088**	**0.77**	**0.11**	**0.0013**
Aroclor 1254	SW8082	mg/kg dw	NS	**0.058**	**0.052**	**1.3**	**0.07**	**0.0034** j	**0.066**	**0.086**	**0.15**	**1.1**	**0.18**	**0.16**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.028**	**0.042**	**0.35**	**0.029**	0.0013 U	**0.039**	**0.042**	**0.087**	**0.37**	**0.11**	**0.083**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.11**	**0.13**	**1.7**	**0.10**	**0.0034**	**0.13**	**0.16**	**0.33**	**2.2**	**0.40**	**0.24**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.11**	**0.13**	**1.7**	**0.10**	**0.0067**	**0.13**	**0.16**	**0.33**	**2.2**	**0.41**	**0.24**
PCBs - Organic Carbon Normalized														
Aroclor 1016	SW8082	mg/kg-OC	--	0.034 U	0.038 U	0.69 U	0.25 U	0.27 U	0.048 U	0.035 U	0.045 U	0.49 U	0.50 U	0.03 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.047 U	0.053 U	0.91 U	0.34 U	0.37 U	0.064 U	0.045 U	0.060 U	0.67 U	0.69 U	0.04 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.047 U	0.053 U	0.91 U	0.34 U	0.37 U	0.064 U	0.045 U	0.060 U	0.67 U	0.69 U	0.04 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.047 U	0.053 U	0.91 U	0.34 U	0.37 U	0.064 U	0.045 U	0.060 U	0.67 U	0.69 U	0.04 U
Aroclor 1248	SW8082	mg/kg-OC	--	**0.81**	**1.2**	0.91 U	**0.34**	0.37 U	**1.4**	**1.2**	**4.0**	**39**	**5.8**	**0.04**
Aroclor 1254	SW8082	mg/kg-OC	--	**2.0**	**2.0**	**47**	**18.3**	**0.96** j	**3.2**	**3.0**	**6.9**	**56**	**9.5**	**5.1**
Aroclor 1260	SW8082	mg/kg-OC	--	**0.95**	**1.6**	**13**	**7.6**	0.37 U	**1.9**	**1.5**	**4.0**	**19**	**5.8**	**2.6**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**3.7**	**4.8**	**60**	**26.2**	**0.96**	**6.6**	**5.7**	**15**	**113**	**21**	**7.7**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**3.7**	**5.0**	**62**	**26.1**	**1.9**	**6.4**	**5.6**	**15**	**113**	**22**	**7.7**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples										
				SED-07						SED-08				
			Screening Level	SED-SS-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SS-08	SED-SS-08	SED-SC-08	SED-SC-08	SED-SC-08
				5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012
				SED-SS-07-052212	SED-SC-07-0-1-053012	SED-SC-07-1-2-053012	SED-SC-07-2-4-053012	SED-SC-07-4-6-053012	SED-SC-07-6-8-053012	SED-SS-08-052212	DUP-052212-1	SED-SC-08-0-1-053012	SED-SC-08-2-4-05301	DUP-053012-2
				0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft
PCBs - Dry Weight														
Aroclor 1016	SW8082	mg/kg dw	NS	0.00099 U	0.00099 U	0.0049 U	0.0049 U	0.0049 U	0.001 U	0.001 U	0.001 U	0.0096 U	0.0097 U	0.0097 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.0065 U	0.0065 U	0.0065 U	0.0013 U	0.0014 U	0.0013 U	0.013 U	0.013 U	0.013 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.0065 U	0.0065 U	0.0065 U	0.0013 U	0.0014 U	0.0013 U	0.013 U	0.013 U	0.013 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.0065 U	0.0065 U	0.0065 U	0.0013 U	0.0014 U	0.0013 U	0.013 U	0.013 U	0.013 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.02**	**0.068**	**0.0065**	0.0065 U	**0.0065**	0.0013 U	**0.02**	**0.021**	**0.072**	**0.44**	**0.44**
Aroclor 1254	SW8082	mg/kg dw	NS	**0.04**	**0.12**	**0.55**	**0.32**	**0.25**	**0.042**	**0.04**	**0.041**	**0.13**	**0.68**	**0.71**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.028**	**0.074**	**0.21**	**0.23**	**0.13**	**0.055**	**0.026**	**0.028**	**0.085**	**0.25**	**0.27**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.088**	**0.26**	**0.77**	**0.55**	**0.39**	**0.097**	**0.086**	**0.090**	**0.29**	**1.4**	**1.4**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.089**	**0.26**	**0.77**	**0.56**	**0.39**	**0.099**	**0.087**	**0.091**	**0.29**	**1.4**	**1.4**
PCBs - Organic Carbon Normalized														
Aroclor 1016	SW8082	mg/kg-OC	--	0.034 U	0.044 U	0.28 U	0.26 U	0.26 U	0.065 U	0.035 U	0.034 U	0.49 U	0.59 U	0.51 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.044 U	0.057 U	0.38 U	0.34 U	0.34 U	0.084 U	0.049 U	0.045 U	0.66 U	0.79 U	0.68 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.044 U	0.057 U	0.38 U	0.34 U	0.34 U	0.084 U	0.049 U	0.045 U	0.66 U	0.79 U	0.68 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.044 U	0.057 U	0.38 U	0.34 U	0.34 U	0.084 U	0.049 U	0.045 U	0.66 U	0.79 U	0.68 U
Aroclor 1248	SW8082	mg/kg-OC	--	**0.68**	**3.0**	**0.38**	0.34 U	**0.34**	0.084 U	**0.69**	**0.72**	**3.7**	**27**	**23**
Aroclor 1254	SW8082	mg/kg-OC	--	**1.4**	**5.3**	**32**	**17**	**13**	**2.7**	**1.4**	**1.4**	**6.6**	**41**	**37**
Aroclor 1260	SW8082	mg/kg-OC	--	**0.96**	**3.3**	**12**	**12**	**6.8**	**3.6**	**0.90**	**0.97**	**4.3**	**15**	**14**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**3.0**	**12**	**45**	**29**	**20**	**6.3**	**3.0**	**3.1**	**15**	**84**	**74**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**3.0**	**12**	**45**	**29**	**21**	**6.4**	**3.0**	**3.1**	**15**	**85**	**73**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples							On-Site Samples			
						SED-09					SED-13			
			Screening Level	SED-SC-08	SED-SC-08	SED-SS-09	SED-SC-09	SED-SC-09	SED-SC-09	SED-SC-09	SED-SS-13	SED-SC-13	SED-SC-13	SED-SC-13
				5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/23/2012	5/31/2012	5/31/2012	5/31/2012
				SED-SC-08-4-6-053013	SED-SC-08-6-8-053013	SED-SS-09-052312	SED-SC-09-0-1-052913	SED-SC-09-1-2-052913	SED-SC-09-2-4-052913	SED-SC-09-6-8-052913	SED-SS-13-052312	SED-SC-13-0-1-053112	SED-SC-13-2-4-053112	SED-SC-13-4-6-053112
				4-6 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft
PCBs - Dry Weight														
Aroclor 1016	SW8082	mg/kg dw	NS	0.0048 U	0.0096 U	0.0098 U	0.0049 U	0.0049 U	0.00099 U	0.00095 U	0.00099 U	0.0096 U	0.0099 U	0.0048 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0064 U	0.013 U	0.013 U	0.0066 U	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.013 U	0.0064 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0064 U	0.013 U	0.013 U	0.0066 U	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.013 U	0.0064 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0064 U	0.013 U	0.013 U	0.0066 U	0.0065 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.013 U	0.0064 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.0064**	**0.045**	**0.13** J	**0.14**	**0.0065**	**0.074**	0.0013 U	**0.024**	**0.16**	**0.46**	**0.31**
Aroclor 1254	SW8082	mg/kg dw	NS	**0.31**	**0.084**	**0.21** J	**0.25**	**0.26**	**0.13**	**0.015**	**0.054**	**0.27**	**0.72**	**0.41**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.13**	**0.071**	**0.12** J	**0.15**	**0.12**	**0.098**	**0.034**	**0.032**	**0.14**	**0.23**	**0.14**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.45**	**0.20**	**0.46**	**0.54**	**0.39**	**0.30**	**0.049**	**0.11**	**0.57**	**1.4**	**0.86**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.45**	**0.21**	**0.47**	**0.54**	**0.39**	**0.30**	**0.051**	**0.11**	**0.58**	**1.4**	**0.86**
PCBs - Organic Carbon Normalized														
Aroclor 1016	SW8082	mg/kg-OC	--	0.31 U	0.50 U	0.36 U	0.219 U	0.22 U	0.038 U	0.057 U	0.037 U	0.43 U	0.66 U	0.34 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.42 U	0.68 U	0.48 U	0.29 U	0.30 U	0.049 U	0.077 U	0.048 U	0.59 U	0.87 U	0.45 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.42 U	0.68 U	0.48 U	0.29 U	0.30 U	0.049 U	0.077 U	0.048 U	0.59 U	0.87 U	0.45 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.42 U	0.68 U	0.48 U	0.29 U	0.30 U	0.049 U	0.077 U	0.048 U	0.59 U	0.87 U	0.45 U
Aroclor 1248	SW8082	mg/kg-OC	--	**0.42**	**2.3**	**4.8** J	**6.3**	**0.30**	**2.8**	0.077 U	**0.89**	**7.2**	**31**	**22**
Aroclor 1254	SW8082	mg/kg-OC	--	**20**	**4.4**	**7.8** J	**11**	**11.9**	**4.9**	**0.89**	**2.0**	**12**	**48**	**29**
Aroclor 1260	SW8082	mg/kg-OC	--	**8.4**	**3.7**	**4.4** J	**6.7**	**5.5**	**3.7**	**2.0**	**1.2**	**6.3**	**15**	**9.9**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**29**	**10**	**17**	**24**	**18**	**11**	**2.9**	**4.1**	**26**	**95**	**61**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**29**	**11**	**17**	**24**	**18**	**11**	**3.0**	**4.1**	**26**	**95**	**61**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples									
				SED-14							SED-15		
			Screening Level	SED-SC-13	SED-SS-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SS-15	SED-SC-15	SED-SC-15
				5/31/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/31/2012	5/31/2012
				SED-SC-13-6-7-053112	SED-SS-14-052312	SED-SC-14-0-1-052912	SED-SC-14-1-2-052912	SED-SC-14-2-4-052912	SED-SC-14-6-8-052912	DUP-052912-2	SED-SS-15-052212	SED-SC-15-0-1-053112	SED-SC-15-2-4-053112
				6 - 7 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft
PCBs - Dry Weight													
Aroclor 1016	SW8082	mg/kg dw	NS	0.00095 U	0.0097 U	0.0098 U	0.0048 U	0.001 U	0.00098 U	0.00099 U	0.00099 U	0.0099 U	0.005 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0013 U	0.013 U	0.013 U	0.0064 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.0067 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0013 U	0.013 U	0.013 U	0.0064 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.0067 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0013 U	0.013 U	0.013 U	0.0064 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.013 U	0.0067 U
Aroclor 1248	SW8082	mg/kg dw	NS	0.0013 U	0.013 U	**0.35**	**0.0064**	**0.0013**	0.0013 U	0.0013 U	0.0013 U	**0.35** J	0.0067 U
Aroclor 1254	SW8082	mg/kg dw	NS	0.0013 U	**0.22** J	**0.62**	**0.25**	**0.051**	0.0013 U	0.0013 U	**0.071**	**0.62** J	**0.2**
Aroclor 1260	SW8082	mg/kg dw	NS	0.0013 U	**0.095** J	**0.3**	**0.0064**	**0.019**	0.0013 U	0.0013 U	**0.026**	**0.14** J	**0.045**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0**	**0.32**	**1.3**	**0.26**	**0.071**	**0**	**0**	**0.097**	**1.1**	**0.25**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.0046**	**0.33**	**1.3**	**0.27**	**0.072**	**0.0046**	**0.0046**	**0.099**	**1.1**	**0.26**
PCBs - Organic Carbon Normalized													
Aroclor 1016	SW8082	mg/kg-OC	--	0.047 U	0.35 U	0.49 U	0.27 U	0.069 U	0.026 U	0.034 U	0.043 U	0.57 U	0.27 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.064 U	0.47 U	0.64 U	0.36 U	0.090 U	0.035 U	0.045 U	0.056 U	0.74 U	0.36 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.064 U	0.47 U	0.64 U	0.36 U	0.090 U	0.035 U	0.045 U	0.056 U	0.74 U	0.36 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.064 U	0.47 U	0.64 U	0.36 U	0.090 U	0.035 U	0.045 U	0.056 U	0.74 U	0.36 U
Aroclor 1248	SW8082	mg/kg-OC	--	0.064 U	0.47 U	**17**	**0.36**	**0.090**	0.035 U	0.045 U	0.056 U	**20** J	0.36 U
Aroclor 1254	SW8082	mg/kg-OC	--	0.064 U	**8.0** J	**31**	**14**	**3.5**	0.035 U	0.045 U	**3.1**	**35** J	**11**
Aroclor 1260	SW8082	mg/kg-OC	--	0.064 U	**3.5** J	**15**	**0.36**	**1.3**	0.035 U	0.045 U	**1.1**	**8.0** J	**2.4**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**0**	**11**	**63**	**15**	**4.9**	**0**	**0**	**4.2**	**63**	**13**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**0**	**12**	**64**	**15**	**5.0**	**0.12**	**0.16**	**4.3**	**63**	**14**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples							
				SED-16				SED-17			SED-18
			Screening Level	SED-SS-16	SED-SC-16	SED-SC-16	SED-SC-16	SED-SS-17	SED-SC-17	SED-SC-17	SED-SS-18
				5/22/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012	5/30/2012	5/30/2012	5/23/2012
				SED-SS-16-052212	SED-SC-16-0-1-053112	SED-SC-16-2-3.5-053111	DUP-053112-2	SED-SS-17-052312	SED-SC-17-0-1-053012	SED-SC-17-2-4-053012	SED-SS-18-052312
				0 - 10 cm	0 - 1 ft	2 - 3.5 ft	2 - 3.5 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	0 - 10 cm
PCBs - Dry Weight											
Aroclor 1016	SW8082	mg/kg dw	NS	0.0019 UJ	0.01 U	0.00098 U	0.00096 U	0.00098 U	0.01 U	0.0096 U	0.00098 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0026 UJ	0.013 U	0.0013 U	0.0013 U	0.0013 U	0.014 U	0.013 U	0.0013 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0026 UJ	0.013 U	0.0013 U	0.0013 U	0.0013 U	0.014 U	0.013 U	0.0013 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0026 UJ	0.013 U	0.0013 U	0.0013 U	0.0013 U	0.014 U	0.013 U	0.0013 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.019** J	**0.12**	**0.012**	**0.0086**	**0.054**	**0.22**	**0.27**	**0.023**
Aroclor 1254	SW8082	mg/kg dw	NS	**0.04** J	**0.22**	**0.03**	**0.02**	**0.12**	**0.34**	**0.24**	**0.046**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.018** J	**0.075**	**0.05**	**0.029**	**0.059**	**0.24**	**0.05**	**0.029**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.087**	**0.42**	**0.092**	**0.058**	**0.23**	**0.80**	**0.56**	**0.098**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.078**	**0.42**	**0.093**	**0.058**	**0.23**	**0.81**	**0.57**	**0.099**
PCBs - Organic Carbon Normalized											
Aroclor 1016	SW8082	mg/kg-OC	--	0.086 UJ	0.48 U	0.045 U	0.041 U	0.029 U	0.44 U	0.63 U	0.029 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.12 UJ	0.63 U	0.060 U	0.056 U	0.039 U	0.62 U	0.86 U	0.038 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.12 UJ	0.63 U	0.060 U	0.056 U	0.039 U	0.62 U	0.86 U	0.038 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.12 UJ	0.63 U	0.060 U	0.056 U	0.039 U	0.62 U	0.86 U	0.038 U
Aroclor 1248	SW8082	mg/kg-OC	--	**0.86** J	**5.8**	**0.55**	**0.37**	**1.6**	**9.7**	**18**	**0.67**
Aroclor 1254	SW8082	mg/kg-OC	--	**1.8** J	**11**	**1.4**	**0.86**	**3.6**	**15**	**16**	**1.3**
Aroclor 1260	SW8082	mg/kg-OC	--	**0.82** J	**3.6**	**2.3**	**1.3**	**1.8**	**11**	**3.3**	**0.85**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**3.9**	**20**	**4.2**	**2.5**	**7.0**	**35**	**37**	**2.9**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**3.5**	**20**	**4.3**	**2.5**	**6.9**	**36**	**38**	**2.9**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples					
				SED-19	SED-22	LDW Samples			
				SED-SS-19	SED-SS-22	B4A	DR122	DR124	LDW-SC29
				5/23/2012	5/23/2012	8/15/2004	9/14/1998	9/15/1998	2/21/2006
			Screening Level	SED-SS-19-052312	SED-SS-22-052312	LDW-B4A-S	SD-DR122-0000	SD-DR124-0000	LDW-SC29-0-1
				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 1 ft
PCBs - Dry Weight									
Aroclor 1016	SW8082	mg/kg dw	NS	0.001 U	0.00099 U	0.01 U	0.02 UJ	0.02 U	0.0039 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.02 U	0.04 U	0.04 U	0.0039 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.01 U	0.02 U	0.02 U	0.0039 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.01 U	0.02 U	0.02 U	0.0039 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.033**	**0.054**	0.01 U	0.02 U	0.02 U	**0.0086** J
Aroclor 1254	SW8082	mg/kg dw	NS	**0.076**	**0.16**	**0.17**	**0.06**	**0.09**	**0.012**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.042**	**0.067**	**0.16**	**0.063**	**0.071**	**0.012** J
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.15**	**0.28**	**0.33**	**0.12**	**0.16**	**0.033**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.15**	**0.28**	**0.35**	**0.15**	**0.19**	**0.035**
PCBs - Organic Carbon Normalized									
Aroclor 1016	SW8082	mg/kg-OC	--	0.035 U	0.059 U	0.51 U	0.92 UJ	0.72 U	0.22 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.045 U	0.077 U	1.0 U	1.8 U	1.4 U	0.22 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.045 U	0.077 U	0.51 U	0.92 U	0.72 U	0.22 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.045 U	0.077 U	0.51 U	0.92 U	0.72 U	0.22 U
Aroclor 1248	SW8082	mg/kg-OC	--	**1.1**	**3.2**	0.51 U	0.92 U	0.72 U	**0.49** J
Aroclor 1254	SW8082	mg/kg-OC	--	**2.6**	**9.5**	**8.7**	**2.8**	**3.2**	**0.68**
Aroclor 1260	SW8082	mg/kg-OC	--	**1.5**	**4.0**	**8.2**	**2.9**	**2.6**	**0.68** J
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**5.2**	**17**	**17**	**5.6**	**5.8**	**1.8**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**5.2**	**17**	**18**	**6.9**	**6.8**	**2.0**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	On-Site Samples						
				LDW Samples						
			Screening Level	LDW-SC29	LDW-SC29	LDW-SS56	LDW-SS57	LDW-SS58	LDW-SS59	LDW-SSB4A
				2/21/2006	2/21/2006	1/24/2005	1/24/2005	1/24/2005	3/14/2005	3/14/2005
				LDW-SC29-1-2	LDW-SC29-2-3.6	LDW-SS56-010	LDW-SS57-010	LDW-SS58-010	LDW-SS59R2-010	LDW-SSB4A-010
				1 - 2 ft	2 - 3.6 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
PCBs - Dry Weight										
Aroclor 1016	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	0.1 U	0.077 U	0.02 U	0.02 U	0.097 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	0.1 U	0.077 U	0.02 U	0.02 U	0.097 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	0.1 U	0.077 U	0.02 U	0.02 U	0.097 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	0.1 U	0.077 U	0.02 U	0.02 U	0.097 U
Aroclor 1248	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	0.1 U	**0.16**	**0.084**	0.02 U	0.097 U
Aroclor 1254	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	**0.5** J	**0.35**	**0.12**	**0.027**	**0.49**
Aroclor 1260	SW8082	mg/kg dw	NS	0.0039 UJ	0.0039 U	**0.25** J	**0.24**	**0.059**	**0.026**	**0.32**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0**	**0**	**0.75**	**0.75**	**0.26**	**0.053**	**0.81**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.014**	**0.014**	**0.90**	**0.79**	**0.27**	**0.083**	**0.96**
PCBs - Organic Carbon Normalized										
Aroclor 1016	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	8.8 U	4.5 U	1.1 U	0.97 U	5.3 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	8.8 U	4.5 U	1.1 U	0.97 U	5.3 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	8.8 U	4.5 U	1.1 U	0.97 U	5.3 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	8.8 U	4.5 U	1.1 U	0.97 U	5.3 U
Aroclor 1248	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	8.8 U	**9.2**	**4.7**	0.97 U	5.3 U
Aroclor 1254	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	**44** J	**20**	**6.7**	**1.3**	**27**
Aroclor 1260	SW8082	mg/kg-OC	--	0.37 UJ	0.81 U	**22** J	**14**	**3.3**	**1.3**	**18**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**0**	**0**	**66**	**43**	**15**	**2.6**	**45**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**1.3**	**2.9**	**80**	**46**	**15**	**4.0**	**53**

PUBLIC REVIEW DRAFT
Table GG-4
Sediment Analytical Results Summary - Polychlorinated Biphenyls
5900 West Marginal Way Site
Seattle, Washington

Constituent	Method	Units	Sediment Sample Location	Off-Site Samples											
				SED-10	SED-11		SED-12	SED-18		SED-20		SED-21		
			Screening Level	SED-SS-10	SED-SS-11	SED-SS-11	SED-SS-12	SED-SC-18	SED-SC-18	SED-SC-20	SED-SC-20	SED-SC-21	SED-SC-21	SED-SC-21
				5/24/2012	5/25/2012	5/25/2012	5/24/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/25/2012	5/25/2012	5/25/2012
				SED-SS-10-052412	SED-SS-11-052512	DUP-052512-1	SED-SS-12-052412	SED-SC-18-0-1-060112	SED-SC-18-2-2.25-06011	SED-SC-20-0-1-060112	SED-SC-20-2-2.5-060112	SED-SC-21-0-1-052512	SED-SC-21-2-4-052512	SED-SC-21-6-8-052512
				0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 2.25 ft	0 - 1 ft	2 - 2.5 ft	0 - 1 ft	2 - 4 ft	6 - 8 ft
PCBs - Dry Weight														
Aroclor 1016	SW8082	mg/kg dw	NS	0.001 U	0.00098 U	0.001 U	0.001 U	0.00097 U	0.00099 U	0.00096 U	0.001 U	0.001 U	0.00099 U	0.00099 U
Aroclor 1221	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Aroclor 1232	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Aroclor 1242	SW8082	mg/kg dw	NS	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U	0.0013 U
Aroclor 1248	SW8082	mg/kg dw	NS	**0.02**	**0.027**	**0.028**	**0.021**	**0.042**	**0.037**	**0.048**	**0.056**	**0.034**	**0.026**	**0.073**
Aroclor 1254	SW8082	mg/kg dw	NS	**0.038**	**0.042**	**0.046**	**0.046**	**0.068**	**0.059**	**0.097**	**0.085**	**0.054**	**0.041**	**0.12**
Aroclor 1260	SW8082	mg/kg dw	NS	**0.023**	**0.024**	**0.027**	**0.025**	**0.05**	**0.035**	**0.058**	**0.043**	**0.034**	**0.026**	**0.072**
Total PCB Aroclors (ND = 0)	SW8082	mg/kg dw	**0.128**	**0.081**	**0.093**	**0.10**	**0.092**	**0.16**	**0.13**	**0.20**	**0.18**	**0.12**	**0.093**	**0.27**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg dw	**0.128**	**0.082**	**0.094**	**0.10**	**0.093**	**0.16**	**0.13**	**0.20**	**0.18**	**0.12**	**0.094**	**0.27**
PCBs - Organic Carbon Normalized														
Aroclor 1016	SW8082	mg/kg-OC	--	0.052 U	0.015 U	0.0094 U	0.043 U	0.042 U	0.036 U	0.044 U	0.060 U	0.0080 U	0.023 U	0.008 U
Aroclor 1221	SW8082	mg/kg-OC	--	0.068 U	0.020 U	0.012 U	0.056 U	0.056 U	0.047 U	0.060 U	0.078 U	0.010 U	0.031 U	0.011 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.068 U	0.020 U	0.012 U	0.056 U	0.056 U	0.047 U	0.060 U	0.078 U	0.010 U	0.031 U	0.011 U
Aroclor 1232	SW8082	mg/kg-OC	--	0.068 U	0.020 U	0.012 U	0.056 U	0.056 U	0.047 U	0.060 U	0.078 U	0.010 U	0.031 U	0.011 U
Aroclor 1248	SW8082	mg/kg-OC	--	**1.0**	**0.41**	**0.26**	**0.91**	**1.8**	**1.3**	**2.2**	**3.4**	**0.27**	**0.61**	**0.60**
Aroclor 1254	SW8082	mg/kg-OC	--	**2.0**	**0.64**	**0.43**	**2.0**	**2.9**	**2.1**	**4.4**	**5.1**	**0.43**	**0.97**	**0.99**
Aroclor 1260	SW8082	mg/kg-OC	--	**1.2**	**0.37**	**0.25**	**1.1**	**2.2**	**1.3**	**2.7**	**2.6**	**0.27**	**0.61**	**0.60**
Total PCBs (ND = 0)	SW8082	mg/kg-OC	--	**4.2**	**1.4**	**0.94**	**4.0**	**6.9**	**4.7**	**9.2**	**11**	**0.96**	**2.2**	**2.2**
Total PCB Aroclors (ND = 0/ND=1/2DL)	SW8082	mg/kg-OC	--	**4.3**	**1.4**	**0.94**	**4.0**	**6.9**	**4.7**	**9.2**	**11**	**0.96**	**2.2**	**2.2**

PUBLIC REVIEW DRAFT

Table GG-4

Sediment Analytical Results Summary - Polychlorinated Biphenyls

5900 West Marginal Way Site

Seattle, Washington

Notes:
-- = No value available
ND=0 = Non-detect values calculation method where only positively identified compounds are included.
***Bold** text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
All depths below mudline.

Key:
cm = centimeters
DUP = duplicate field sample
dw = dry weight
ft = feet
LDW = Lower Duwamish Waterway
mg/kg = milligrams per kilogram
NA = not available, no screening value calculated.
OC = organic carbon normalized
PCB = polychlorinated biphenyls
SC = sediment core sample
SED = sediment sample
SQS = sediment quality standards (WAC 173-204-320)
SS = surface sediment sample

Data Qualifiers:
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
J = Detected compound qualified as estimated.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.
UJ = Non-detected compound qualified as estimated.

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples									
					SED-01				SED-02					
					SED-SS-01	SED-SC-01	SED-SC-01	SED-SC-01	SED-SS-02	SED-SC-02	SED-SC-02	SED-SC-02	SED-SC-02	
					5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SS-01-052212	SED-SC-01-0-1-053012	SED-SC-01-2-4-053012	DUP-053012-4	SED-SS-02-052312	SED-SC-02-0-1-052912	SED-SC-02-2-4-052912	SED-SC-02-6-8-052912	SED-SC-02-8-10-052912	8
					0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	8-10 ft Archived	
Dioxin Furans - Dry Weight														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**0.409** j	**0.481** j	0.25 U	0.191 U	**2.44**	**5.35**	**1.71**	**7.12**	**1.72** j	
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**6.61**	**6.43**	**2.14**	**2.19**	**59.5**	**77**	**25.9**	**60.8**	**27.7**	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	1.41 U	**1.71** j	**0.715** j	**0.823** j	**9.5**	**16.4**	**18.6**	**4.42** j	**2.32** j	
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**9.14**	**11**	**4.42**	**4.02**	**191**	**213**	**141**	**61.1**	**49.1**	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**2.56** j	**2.89** j	**1.21** j	**1.11** j	**17.1**	**22.3**	**84.3**	**8.26**	**7.43** j	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**13.9**	**12.2**	**5.06**	**4.56** j	**195**	**445**	**164**	**73.6**	**160**	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**8.32**	**9.07**	**3.51** j	**3.55** j	**54.6**	**78**	**195**	**25.3**	**27.5** j	
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**94**	**93.1**	**36.8**	**35.1**	**933**	**1960**	**1340**	**432**	**581**	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**354**	**329**	**132**	**122**	**2880**	**12900**	**1470**	**2260**	**5500**	
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**1040**	**823**	**312**	**295**	**5380**	**24200**	**2870**	**4850**	**9390**	
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**3850**	**4240**	**2080**	**1270**	**68200**	**285000**	**183000**	**32300**	**50400**	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**0.904** j	**0.73** j	**0.307** j	**0.28** j	**5.04**	**9.1**	**3.76**	**2.75**	**3.41** j	
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**19.6**	**18.4**	**6.45**	**6.83**	**109**	**178**	**50.1**	**109**	**98.6**	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**1.27** j	**1.02** j	0.379 U	**0.334** j	**19.4**	**30.5**	**5.84**	**7.12**	**16.4** j	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**2.08** j	**2.05** j	**0.786** j	**0.796** j	**63.8**	**114**	**16.5**	**20**	**42.9** j	
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**37.6**	**38.1**	**15.8**	**13.2**	**703**	**1850**	**436**	**464**	**761**	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**9.56**	**10.5**	**5.1**	**4.44** j	**629**	**1700**	**158**	**253**	**541**	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**2.62** j	**2.74** j	1.24 U	**1.06** j	**103**	**268**	**30.9**	**40.9**	**83.1** j	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**0.252** j	0.26 U	0.086 U	**0.116** j	**7.12**	**14.5**	**2.05** j	**3.24** j	**6.38** j	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**1.7** j	**1.66** j	0.701 U	**0.667** j	**41.1**	**122**	**21.7**	**17**	**27** j	
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**115**	**111**	**43.3**	**42**	**4180**	**11700**	**1480**	**2130**	**4560**	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**60.8**	**62.6**	**26**	**23.4**	**1860**	**5820**	**667**	**960**	**2690**	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**5.54**	**6.14**	**2.8** j	**2.45** j	**289**	**882**	**91.4**	**141**	**402**	
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**229**	**240**	**96.5**	**81.8**	**8440**	**25600**	**2220**	**4810**	**14600**	
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**181**	**184**	**80.9**	**62**	**2690**	**17400**	**2470**	**2630**	**12700**	
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**11.2**	**12.1**	**4.96**	**4.62**	**208**	**609**	**169**	**104**	**208**	

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples									
					SED-03								SED-04	
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SS-03 5/22/2012 SED-SS-03-052212 0 - 10 cm	SED-SC-03 5/30/2012 SED-SC-03-0-1-053012 0 - 1 ft	SED-SC-03 5/30/2012 SED-SC-03-2-4-053012 2 - 4 ft	SED-SC-03 5/30/2012 DUP-053012-3 2 - 4 ft	SED-SC-03 5/30/2012 SED-SC-03-4-6-053012 4-6 ft [4] Archived	SED-SC-03 5/30/2012 SED-SC-03-6-8-053012 6 - 8 ft	SED-SS-04 5/22/2012 SED-SS-04-052212 0 - 10 cm	SED-SC-04 5/30/2012 SED-SC-04-0-1-053012 0 - 1 ft	SED-SC-04 5/30/2012 SED-SC-04-1-2-053012 1-2 ft [1] Archived
Dioxin Furans - Dry Weight														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	6.81	50.4	5.64	4.74	1.10 U	0.049 U	1.37	1.49 j	2.4 j	
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	190	519	188	116	8.3	0.187	99	94.7	271	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	31.4	147	18.5	8.82	1.55 j	0.099 U	10.5	8.84 j	13.5 j	
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	390	3080	263	148	18.4	1.76	746	860	2770	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	65.1 j	269	40.1	18	2.53 j	1.39 j	29 j	25.4	49.4 j	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	675	3650	753	343	32 j	1.59 j	663	418	1000	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	206	1070	140	67.8	9.47 j	1.33 j	120	93.8	215	
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	2880	21000	3290	1540	137	10.3	4470	8520	19200	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	18300	79500	19800	9820	845	44.6	27900	20600	47200	
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	32300	152000	36600	17800	1470	77	46200	40900	90400	
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	443000	528000	124000	125000	21200	1200	227000	180000	335000	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	21.3	209	23.1	11.2	1.63 j	0.073 U	5.72	12.2	29.7	
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	432	1740	766	362	33.2	0.941	149	226	509	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	64.3	412	122	48.5	5.42 j	0.15 j	50.4	55.8	151	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	231	1160	331	153	21.2 j	0.427 j	149	161	404	
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	3640	14800	5380	2470	261	7.17	2330	1990	5300	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	2170	14400	4680	1990	200	4.85 j	4110	1470	3810	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	358	2440	627	286	29.9 j	0.797 j	557	246	601	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	24.8 j	174	366	19.9	2.08 j	0.077 U	36.3 j	255	51.5 j	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	146	847	206	92.5	9.91 j	0.381 j	164	73.9	186	
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	16000	106000	30200	12100	1030	30.5	21200	10500	24000	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	7650	44500	10900	4970	444	17.1	15500	5030	10300	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	1180	6580	2620	1090	87.6 j	2.82 j	3090	706	1830	
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	34100	232000	57200	25100	1820	61.1	58800	32400	47700	
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	11100	25000	11600	11400	928	40.8	15300	24300	28500	
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		2	884	4335	1185	543	57.8	2.27	1164	644	1438	

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location							On-Site Samples						
							SED-05						
					SED-SC-04	SED-SC-04	SED-SS-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SS-06
					5/30/2012	5/30/2012	5/23/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/23/2012
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SC-04-2-4-053012	SED-SC-04-6-7.1-053012	SED-SS-05-052312	SED-SC-05-0-1-060112	SED-SC-05-2-4-060112	SED-SC-05-4-6-060112	DUP-060112-2	SED-SC-05-6-8-060112	SED-SS-06-052312
					2 - 4 ft	6 - 7.1 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft 4	4-6 ft 4	6 - 8 ft	0 - 10 cm
										Archived	Archived		
Dioxin Furans - Dry Weight													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	0.101 U	0.045 U	**0.55** j	**0.712** j	**1.61**	**0.93** j	0.879 U	0.038 U	**0.898** j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**4.16**	**0.055**	**18.6**	**17.3**	**31.8**	**63.8**	**66.1**	**0.434**	**12.7**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**0.405** j	0.045 U	**2.23** j	**2.83** j	**6.48**	**2.75** j	**3.02** j	**0.038** j	**3.28** j
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**23.5**	0.045 U	**76**	**102**	**323**	**408**	**424**	**1.87**	**33**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**1.28** j	0.045 U	**5.67**	**8.19**	**27.8** j	**22.4** j	**16.9** j	**0.215** j	**5.39**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**14.2**	0.052 U	**50.1**	**47**	**281**	**188**	**155**	**0.784** j	**40.6**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**4.42** j	0.045 U	**18.2**	**24.7**	**71.5**	**39.2** j	**36.1** j	**0.464** j	**17.9**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**325**	**0.541**	**380**	**564**	**2430**	**1640**	**1280**	**10.9**	**245**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**649**	1.41 U	**1950**	**2140**	**14100**	**7980**	**7420**	**32.7**	**1210**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**1360**	3.04 U	**4100**	**4430**	**25100**	**13100**	**11800**	**57.1**	**2490**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**5550**	57.3 U	**16100**	**17200**	**94300**	**40200**	**45100**	**217**	**22500**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**0.353** j	0.045 U	**1.38**	**1.38**	**6.22**	**2.56** j	**2.69** j	0.038 U	**1.44**
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**8.36**	0.045 U	**33.8**	**34.5**	**49.9**	**77.7**	**66.2**	**0.189**	**39.9**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**1.7** j	0.045 U	**3.17** j	**3.29** j	**17.2** j	**10.5** j	**8.66** j	**0.05** j	**3.94** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**4.35** j	0.045 U	**10.3**	**7.93**	**50.8**	**28.1** j	**26.9** j	**0.191** j	**11.7**
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**55.2**	**0.054**	**153**	**128**	**308**	**662**	**545**	**1.62**	**182**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**43.3**	**0.124** j	**89.2**	**58.6**	**605**	**294**	**277**	**1.39** j	**111**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**6.74**	0.045 U	**15**	**11.2**	**98.5**	**51.9** j	**48.7** j	**0.237** j	**19.1**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	0.221 U	0.045 U	**1.08** j	0.19 U	**7.21** j	**4.32** j	**5.19** j	**0.04** j	**1.32** j
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**2.28** j	0.045 U	**6.19**	**5.01**	**37.2** j	**21** j	**17.7** j	**0.127** j	**8.05**
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**263**	**0.666**	**847**	**528**	**4360**	**3480**	**3280**	**12.8**	**786**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**127**	0.605 U	**514**	**294**	**3010**	**2310**	**2420**	**8.6**	**397**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**22.5**	**0.094** j	**58.2**	**34.9**	**336**	**232**	**270**	**1.08** j	**54**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**584**	2.23 U	**2700**	**1500**	**17800**	**13600**	**12700**	**42.1**	**1720**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**237**	1.76 U	**2280**	**674**	**12800**	**10000**	**13400**	**44**	**1190**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**18.8**	**0.101**	**55.4**	**51.7**	**344**	**195**	**186**	**0.946**	**52.0**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					SED-06					SED-07			
					SED-SS-06	SED-SC-06	SED-SC-06	SED-SC-06	SED-SC-06	SED-SS-07	SED-SC-07	SED-SC-07	SED-SC-07
					5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012
Constituent[1]	Method	Units	TEFs	Screening Level	DUP-052312-1	SED-SC-06-0-1-052912	SED-SC-06-2-4-052912	SED-SC-06-6-8-052912	SED-SC-06-8-10-052912	SED-SS-07-052212	SED-SC-07-0-1-053012	SED-SC-07-2-4-053012	SED-SC-07-6-8-053012
					0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	8-10 ft 8 Archived	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft
Dioxin Furans - Dry Weight													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	0.793 U	**1.39**	**7.71**	**0.656** j	**0.879** j	**0.477** j	**0.612** j	**1.31** j	**0.32** j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**20**	**19.6**	**53.7**	**12.4**	**45.4**	**7.23**	**10.1**	**32.4**	**12**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**2.81** j	**5.05**	**13.8**	**1.93** j	**3.56** j	**1.49** j	**2.7** j	**6.65** j	1.25 U
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**42.8**	**56.3**	**119**	**23.4**	**82.9**	**19.5**	**26.8**	**87.3**	**18.5**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**5.34**	**9.56**	**20.5**	**3.78** j	**14.8**	**3.04** j	**12.9**	**15** j	**2.35** j
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**38.2**	**72.5**	**165**	**41**	**499**	**17.7**	**42**	**261**	**34.8**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**17**	**30.4**	**79.2**	**13.2**	**52.2**	**10.2**	**35.9**	**55.6**	**7.66** j
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**230**	**446**	**951**	**217**	**1580**	**147**	**344**	**1440**	**166**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**1300**	**2170**	**5120**	**1290**	**10400**	**626**	**1380**	**9670**	**916**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**2670**	**4480**	**9350**	**2400**	**16100**	**1410**	**3000**	**17300**	**1650**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**48500**	**27600**	**82500**	**11000**	**66200**	**5560**	**12900**	**73900**	**7840**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**1.26**	**2.71**	**6.19**	**1.78**	**4.57**	**0.729** j	**1.43**	**5.62**	**2.86** j
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**42.1**	**55.9**	**237**	**62.2**	**149**	**23.8**	**30.9**	**164**	**63.4**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**3.43** j	**6.06**	**13.2**	**4.74**	**14.9**	**1.26** j	**2.91** j	**26.1**	**6.6** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**9.48**	**17.8**	**42.7**	**13.7**	**45.1**	**2.96** j	**7.3**	**65.7**	**23.1**
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**161**	**282**	**719**	**265**	**996**	**50**	**106**	**1150**	**296**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**83.2**	**141**	**421**	**139**	**597**	**23.1**	**71.9**	**735**	**178**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**15.3**	**25.5**	**71.4**	**24.5**	**96.6**	**4.91**	**15.2**	**143**	**29.1**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**1.09** j	**2.12** j	**5.38**	**1.71** j	**7.06**	**0.279** j	**1.47** j	**218**	**29.3**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**6.82**	**11.3**	**29.8**	**9.58**	**41.1**	**2.58** j	**5.94**	**43.6**	**11.1** j
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**658**	**1180**	**3010**	**1150**	**14300**	**193**	**596**	**7920**	**1110**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**390**	**582**	**1590**	**599**	**6620**	**110**	**402**	**5300**	**475**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**49.8**	**81.3**	**211**	**81.2**	**621** j	**14.4**	**54**	**541**	**75.8**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**1710**	**2870**	**7150**	**3290**	**39800**	**468**	**1980**	**34300**	**2020**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**1750**	**1930**	**5050**	**2430**	**35800**	**343**	**1260**	**25000**	**1030**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**55.4**	**78.7**	**210**	**54.0**	**357**	**18.4**	**46.9**	**361**	**54.9**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples								
						SED-08							
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SC-07 5/30/2012 SED-SC-07-8-10-053012 8-10 ft Archived	SED-SS-08 5/22/2012 SED-SS-08-052212 0 - 10 cm	SED-SS-08 5/22/2012 DUP-052212-1 0 - 10 cm	SED-SC-08 5/30/2012 SED-SC-08-0-1-053012 0 - 1 ft	SED-SC-08 5/30/2012 SED-SC-08-2-4-053012 2 - 4 ft	SED-SC-08 5/30/2012 DUP-053012-2 2 - 4 ft	SED-SC-08 5/30/2012 SED-SC-08-6-8-053012 6 - 8 ft	SED-SC-08 5/30/2012 SED-SC-08-8-10-053012 8-10 ft Archived	SED-SS-09 5/23/2012 SED-SS-09-052312 0 - 10 cm
Dioxin Furans - Dry Weight													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	0.876 U	**0.472** j	**0.464** j	**0.645** j	**2.07**	**1.84**	**0.229** j	0.959 U	**4.53** j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	0.876 U	**6.23**	**5.77**	**5.71**	**14.8**	**14.1**	**3.21**	0.959 U	**68.3**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	0.876 U	**1.32** j	**1.6** j	**2.16** j	**5.33**	**5.28**	**0.95** j	0.930 U	**39.1**
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	0.876 U	**11.1**	**12.9**	**18.6**	**40**	**40.6**	**9.45**	**0.992**	**285**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	0.876 U	**2.3** j	**2.61** j	**4.08** j	**8.01**	**8.17**	**1.87** j	1.85 U	**126**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**4.93** j	**11.9**	**12.6**	**25.9**	**66.4**	**67.6**	**29**	**10.8** j	**376**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**1.6** j	**7.96**	**8.46**	**13.6**	**28.2**	**29.1**	**5.83**	**4.09** j	**265**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**18.3**	**106**	**107**	**181**	**399**	**398**	**122**	**42.6**	**2620**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**171**	**381**	**402**	**835**	**2140**	**2300**	**1100** J	**225**	**10900**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**270**	**1150**	**1130**	**2080**	**4340**	**4460**	**1970**	**423**	**23000**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**1210**	**4390**	**5680**	**9410**	**24400**	**26300**	**10000**	**2000**	**145000**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	0.876 U	**0.834** j	**0.766** j	**1.1**	**2.79**	**2.49**	**0.8** J	1.33 U	**7.97**
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**0.91**	**25**	**23**	**18.1**	**71.1**	**98.7**	**11.6**	**10.4**	**303**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**0.886** j	**1.22** j	**1.28** j	**2.18** j	**5.49**	**5.32**	**3.7** J	**2.23** j	**27.8**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**1.63** j	**2.65** j	**2.88** j	**5.61** j	**15.9**	**14.6**	**10.9** J	4.18 U	**80.2**
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**17**	**45.6**	**49.7**	**44.3**	**156**	**167**	**72.2** J	**32.2**	**1240**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**12.5** j	**16.6**	**19.2**	**42.7**	**131**	**175**	**110**	**36** j	**755**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**2.73** j	**3.63** j	**4.18** j	**8.21**	**24.1**	**29.7**	**16.8**	**5.85** j	**150**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	0.876 U	**0.343** j	**0.303** j	**0.621** j	**1.76** j	**2.03** j	**1.31** j	1.51 U	**151**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**0.972** j	**1.85** j	**2.2** j	**4.18** j	**9.67**	**10.2**	**6.06**	2.94 U	**52.8**
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**122**	**141**	**156**	**336**	**1010**	**1100**	**649**	**232**	**5630**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**115**	**79.4**	**79.6**	**234**	**598**	**691**	**407**	**113**	**2850**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**10.9** j	**8.76**	**9.73**	**26**	**80.2**	**90.8**	**51**	**17.6** j	**435**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**522**	**338**	**342**	**1290**	**3500**	**3330**	**2000**	**511**	**14200**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**563**	**251**	**249**	**954**	**2280**	**2080**	**1240**	**365**	**6160**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**7.30**	**13.2**	**14.7**	**28.7**	**75.7**	**83.4**	**40.7**	**12.0**	**444**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples								
					SED-09			SED-13					
					SED-SC-09	SED-SC-09	SED-SC-09	SED-SS-13	SED-SC-13	SED-SC-13	SED-SC-13	SED-SC-13	SED-SS-14
					5/29/2012	5/29/2012	5/29/2012	5/23/2012	5/31/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SC-09-0-1-052912	SED-SC-09-2-4-052912	SED-SC-09-6-8-052912	SED-SS-13-052312	SED-SC-13-0-1-053112	SED-SC-13-2-4-053112	SED-SC-13-4-6-053112	SED-SC-13-6-7-053112	SED-SS-14-052312
					0 - 1 ft	2 - 4 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft [4] Archived	6 - 7 ft	0 - 10 cm
Dioxin Furans - Dry Weight													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**0.838** j	**2.4** j	**0.229** j	**0.892** j	**2.01**	**8.34**	**1.28** j	0.06 U	**1.34**
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**17**	**52.1**	**8.83**	**13.9**	**30**	**56.1**	**6.79**	0.734 U	**60.9**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**3.09** j	**5.31** j	**0.678** j	**3.3** j	**8.05**	**9.55**	**1.62** j	**0.137** j	**8.96**
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**33.9**	**106**	**9.27**	**30.7**	**78.8**	**78.5**	**5.56**	**0.921**	**148**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**6.8** j	**12.7** j	**1.05** j	**6.12**	**12.9**	**17.4** J	**2.91** j	**0.249** j	**42.8**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**82.4**	**226**	**18.9**	**44.3**	**121**	**94.9**	**16.7** j	**0.867** j	**127**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**20.9** j	**55.8**	**3.05** j	**19.9**	**40.6**	**56.9** J	**7.81** j	**0.698** j	**65.3**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**435**	**1140**	**77.4**	**254**	**640**	**618**	**92.8**	**6.51**	**833**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**2420**	**7680**	**551**	**1310**	**2820**	**2180**	**497**	**16.2**	**3820**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**4620**	**14300**	**1200**	**2940**	**5700**	**4190**	**920**	**33.3**	**6710**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**20500**	**63700**	**6330**	**35400**	**58400**	**56500**	**5460**	**149**	**55600**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**2.55** j	**6.53**	**1.19**	**1.76**	**4.03**	**3.53**	**1.21** j	0.08 U	**2.19**
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**81.8**	**199**	**48.1**	**44.3**	**96**	**153**	**32.2**	**1.83**	**56.2**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**8.41** j	**25.5**	**3.44** j	**4.75** j	**11.2**	**9.03**	**2.13** j	**0.061** j	**10.4**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**23.6**	**62.4**	**10.1**	**16.5**	**39.1**	**28.6**	**5.61** j	**0.23** j	**39**
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**406**	**1280**	**159**	**226**	**586**	**405**	**72.5**	**1.95**	**571**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**269**	**841**	**133**	**129**	**336**	**227**	**41.2** j	**1.84** j	**385**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**45.7**	**142**	**17.9**	**20.5**	**61.1**	**40.3**	**9.1** j	**0.446** j	**62.7**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**75.5**	**195**	**17.8**	**1.36** j	**4.06** j	**2.93** j	0.917 U	0.051 U	**4.17** j
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**15.1** j	**49.3**	**6.7**	**8.62**	**28.1**	**16.7**	**3.63** j	**0.213** j	**23.9**
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**2280**	**7840**	**677**	**801**	**2470**	**1590**	**336**	**11.6**	**2710**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**1210**	**3820**	**301**	**334**	**1010**	**805**	**196**	**6.36**	**1340**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**216**	**546**	**70.1**	**50.9**	**148**	**110**	**24.1** j	**0.803** j	**187**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**6300**	**23600**	**1390**	**1410**	**4750**	**3310**	**915**	**20.6**	**6520**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**3180**	**11700**	**452**	**1160**	**2570**	**2040**	**923**	**13**	**5070**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**109**	**323**	**35.3**	**60.4**	**141**	**121**	**22.0**	**0.958**	**165**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples								
					SED-14						SED-15		
					SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SC-14	SED-SS-15	SED-SC-15	SED-SC-15
					5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/31/2012	5/31/2012
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SC-14-0-1-052912	DUP-052912-1	SED-SC-14-2-4-052912	SED-SC-14-4-6-052912	SED-SC-14-6-8-052912	DUP-052912-2	SED-SS-15-052212	SED-SC-15-0-1-053112	SED-SC-15-2-4-053112
					0 - 1 ft	1 - 2 ft	2 - 4 ft	4-6 ft 4 Archived	6 - 8 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft
Dioxin Furans - Dry Weight													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**8.94**	**2.44**	**1.89**	0.118 U	0.052 U	0.046 U	**1.93**	**8.76** j	**1.9** j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**220**	**49.9**	**49**	**3.09**	0.348 U	0.218 U	**57.3**	**273**	**88.3**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**53.5**	**18.4**	**9.36**	**0.487** j	**0.087** j	0.046 U	**16.3**	**56.5** j	**12.2** j
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**1230**	**338**	**95.3**	**6.24**	**0.6**	**0.243**	**133**	**726**	**219**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**113**	**44.2** j	**22.4**	**0.911** j	0.103 U	**0.113** j	**40.2**	**99.4** j	**40.3** j
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**1390**	**428**	**131**	**5.52**	**0.817** j	**0.644** j	**328**	**733**	**307**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**356**	**138**	**77.9**	**2.53** j	**0.34** j	**0.284** j	**99.3**	**327**	**138**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**8020**	**2540**	**783**	**33.9**	**4.5**	**3.57**	**1470**	**3800**	**1850**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**51200**	**13300**	**6420**	**135**	18.4 U	18.2 U	**6800**	**22800**	**9480**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**87200**	**24600**	**12800**	**246**	33.8 U	34.4 U	**11600**	**41400**	**18000**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**420000**	**126000**	**353000**	**2100**	290 U	519 U	**80200**	**3800000**	**65900**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**33.6**	**9.59**	**4.3**	**0.43** j	0.101 U	0.046 U	**5.11**	**24.5**	**9.73**
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**513**	**223**	**89.7**	**8.24**	**0.299**	**0.266**	**109**	**515**	**303**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**132**	**45.5**	**12.7**	**0.974** j	0.101 U	0.046 U	**31.1**	**64.1** j	**32.2** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**447**	**129**	**49.6**	**3.4** j	0.275 U	**0.183** j	**111**	**205**	**70.5**
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**6110**	**1370**	**646**	**36.6**	**3.42**	**2.36**	**1610**	**3560**	**1160**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**4430**	**1630**	**475**	**18.3**	**2.16** j	**2.17** j	**1170**	**2550**	**1070**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**680**	**290**	**72.6**	**3.05** j	**0.381** j	**0.363** j	**191**	**437**	**176**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**61.3** j	**17.9**	**4.45** j	0.390 U	0.052 U	**0.16** j	**12**	**111** j	**163**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**240**	**153**	**28.7**	**1.41** j	**0.208** j	**0.168** j	**70.3**	**162**	**59.3**
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**34100**	**10400**	**2720**	**118**	**15.6**	**12.8**	**8760**	**15500**	**6490**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**17700**	**6140**	**1370**	**52.5**	6.66 U	6.96 U	**2720**	**7120**	**2890**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**2480**	**1110**	**238**	**8.58**	**1.15** j	**1.21** j	**339** j	**1190**	**690**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**97800**	**26400**	**5420**	**236**	25.3 U	26 U	**11900**	**29000**	**13000**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**28100**	**13200**	**3510**	**172**	18.8 U	14.8 U	**10800**	**33000**	**4780**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**1779**	**579**	**295**	**7.47**	**0.742**	**0.712**	**370**	**2034**	**384**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples								
					SED-16				SED-17				
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SS-16	SED-SC-16	SED-SC-16	SED-SC-16	SED-SS-17	SED-SC-17	SED-SC-17	SED-SC-17	SED-SC-17
					5/22/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012
					SED-SS-16-052212	SED-SC-16-0-1-053112	SED-SC-16-2-3.5-053112	DUP-053112-2	SED-SS-17-052312	SED-SC-17-0-1-053012	SED-SC-17-2-4-053012	DUP-053012-5	SED-SC-17-4-5-053012
					0 - 10 cm	0 - 1 ft	2 - 3.5 ft	2 - 3.5 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	4-5 ft [4] Archived
Dioxin Furans - Dry Weight													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	3.02	4.5 j	1.02 j	0.455 j	3.28	5.19	15.1	15	7.18 j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	94.6	199	19.5	14.4	68.2	75	97.8	113	169
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	17.5	21.6 j	8.22 j	2.02 j	16.4	21.3	26.5	23	16.4 j
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	170	485	49.2	23.2	187	246	306	294	235
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	30.9	60.3	16.4 j	4.47	33.6	45.4	23.6	31.1	21.7 j
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	301	513	86.7	33.2	292	553	366	320	238
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	93.8	126	44.9 j	12.5	102	102	68.2	149	70.5 j
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	1440	2470	490	149	1580	2370	1620	1770	1120
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	4310	14400	2640	1210	4660	18900	7330	20600	7350
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	7810	25600	5560	2210	8300	34800	14500	43900	14600
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	90600	259000	67700	52900	98800	4400000	159000	8070000	2120000
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	8.26	12.1	2.55 j	1.33	7	10.6	28.1	8.83	11.4 j
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	202	280	77.4	35.5	170	221	358	261	264
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	31.3	49.9	8.63 j	2.81 j	22.3	44.3	31.5	26.7	28.4 j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	106	175	26.7 j	8.98	80.8	148	120	97.5	113
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	1580	2330	424	107	1210	2140	1340	1510	1560
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	1130	2140	316	91.1	668	2380	875	997	805
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	175	325	56.9	16.6	111	290	149	143	150
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	11.6	167	23.2 j	1.04 j	7.36	22.7	10.2	9.48	8.97 j
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	71.5	118	22.5 j	7.12	51	115	91.4	63	68.6 j
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	7280	12500	2080	726	5180	15200	6770	6670	4960
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	1870	5490	805	454	2430	3790 j	2500	2050 j	2640
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	258 j	1030	156	61.5	356	831 j	403	355 j	343
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	6930	26000	3760	2500	12000	14600	11000	5690	9100
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	4110	10800	1460	1750	4190	60000	7190	61800	31000
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		2	328	716	131	55.6	277	1997	392	2910	944

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					On-Site Samples							
					SED-18	SED-19	SED-22	LDW Samples				
					SED-SS-18	SED-SS-19	SED-SS-22	LDW-SS56	LDW-SS57	LDW-SS58	LDW-SS59	DR123
					5/23/2012	5/23/2012	5/23/2012	1/24/2005	1/24/2005	1/24/2005	3/14/2005	3/14/2005
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SS-18-052312	SED-SS-19-052312	SED-SS-22-052312	LDW-SS56-010	LDW-SS57-010	LDW-SS58-010	LDW-SS59R2-010	SD-DR123-0000
					0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Dioxin Furans - Dry Weight												
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**0.409** j	**1.93** j	**2.9**	**4.57** J	**4.17** J	**9.28**	1.04 U	
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**5.83**	**36.6**	**131**					**75**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**1.45** j	**9.54** j	**12.1**	**34.5** J	**16.7** J	**19.9** J	**5.24** J	
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**11.3**	**86.3**	**1720**					**58**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**2.81** j	**23.4**	**38.3**	**124**	**33.7** J	**31.6** J	**11.4** J	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**12.4**	**118**	**477**	**3400**	**350**	**480**	**65.3**	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**9.41**	**53.3**	**141**	**315**	**95.2**	**99.6**	**26.4**	
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**134**	**737**	**9470**					**1,200**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**450**	**4740**	**9950**	**73700**	**14900**	**11300**	**1880**	
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**1460**	**9900**	**17900**					**9,500**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**3880**	**303000**	**91800**	**241000**	**172000**	**124000**	**15600**	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**0.848** j	**5.36**	**10.2**	**14.8**	**8.64**	**13.6**	**1.9**	
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**24.9**	**98.5**	**116**					**150**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**1.14** j	**11.6** j	**37.7**	**69.3**	**27.8** J	**56.9**	**1.08** J	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**2.48** j	**48.6**	**123**	**230**	**95.9**	**181**	**4.71** J	
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**40.8**	**548**	**1020**					**230**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**13.1**	**289**	**1240**	**2530**	**895**	**1670**	**30.5**	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**3.21** j	**51.1**	**216**	**365**	**151**	**284**	**7.2** J	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**0.278** j	**35.8**	**14.9**	**33.8** J	**10.6** J	**21.7** J	**0.568** J	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**1.77** j	**22.4**	**74.3**	**302** J	**62** J	**121** J	**5.38** J	
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**132**	**2010**	**8620**					**3,900**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**81.4**	**893**	**4470**	**40300**	**4040**	**4710**	**288**	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**8.47**	**158**	**712**	**3720**	**487**	**756**	**24.2** J	
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**358**	**4130**	**24400**					**9,300**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**314**	**3330**	**13100**	**93700**	**18700**	**9630**	**1030**	
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**13.7**	**236**	**457**	**2100** J	**463** J	**565** J	**49.0** J	

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					LDW-SC29	LDW-SC29	LDW-SC29	SED-10	SED-11		SED-12
					LDW-SC29	LDW-SC29	LDW-SC29	SED-SS-10	SED-SS-11	SED-SS-11	SED-SS-12
					2/21/2006	2/21/2006	2/21/2006	5/24/2012	5/25/2012	5/25/2012	5/24/2012
Constituent[1]	Method	Units	TEFs	Screening Level	LDW-SC29-0-1	LDW-SC29-1-2	LDW-SC29-2-3_6	SED-SS-10-052412	SED-SS-11-052512	DUP-052512-1	SED-SS-12-052412
					0-1 ft	1-2 ft	2-3.6 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Dioxin Furans - Dry Weight											
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**0.325**	0.053 U	0.044 U	**0.464** j	**0.419** j	**0.402** j	**0.361** j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--				**4.8**	**5.15**	**4.55**	**4.39**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**0.883** J	**0.064** J	0.044 U	**1.21** j	**1.28** j	**1.45** j	**1.09** j
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--				**8.12**	**8.7**	**8.81**	**6.97**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**1.4**	0.106 U	0.044 U	**2.14** j	**2.69** j	**2.62** j	**1.84** j
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**44.5**	**0.891**	**0.103** J	**10.2**	**9**	**11.3**	**8.16**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**6.98**	**0.331** J	0.066 U	**7.24**	**7.79**	**7.98**	**5.38**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--				**80.3**	**78.3**	**80.6**	**57.2**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**1270**	**31.1**	**2.56**	**311**	**259**	**294**	**223**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--				**847**	**692**	**741**	**610**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**10700**	**207**	**20.9**	**2950**	**2170** J	**2120** J	**4980**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	2.3 U	**0.074** J	0.044 U	**0.625** j	0.864 U	**0.76** j	**0.682** j
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--				**21.7**	**22.3**	**20.3**	**35.1**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**5.82**	**0.093** J	0.044 U	**0.76** j	**0.796** j	**0.811** j	**0.603** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**21.3**	**0.284** J	**0.067** J	**1.75** j	**1.77** j	**1.7** j	**1.31** j
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--				**30.3**	**37.4**	**30.2**	**27.7**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**152**	**1.48**	**0.176** J	**8.43**	**7.44**	**8.7**	**6.31**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**24.3**	**0.311** J	0.044 U	**2.17** j	**2.39** j	**2.59** j	**1.75** j
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**2.36**	0.044 U	0.044 U	**0.177** j	0.225 U	0.179 U	**0.158** j
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**9.55**	**0.194** J	0.044 U	**1.57** j	**1.46** j	**1.39** j	**2.43** j
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--				**92.2**	**90.9**	**81**	**81.7**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**508**	**11.1**	**0.743** J	**65.2**	**65.6**	**55**	**63.9**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**66.2**	**1.47**	0.093 U	**5.68**	**4.91** j	**6.23**	**4.02** j
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--				**278**	**189**	**201**	**265**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**1640**	**65.5**	**2.08**	**254**	**141**	**173**	**219**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**54.1** J	**1.03 J**	**0.147** J	**10.3**	**9.37**	**10.2**	**9.00**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Sediment Sample Location					Off-Site Samples						
					SED-18		SED-20		SED-21		
					SED-SC-18	SED-SC-18	SED-SC-20	SED-SC-20	SED-SC-21	SED-SC-21	SED-SC-21
					6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/25/2012	5/25/2012	5/25/2012
Constituent[1]	Method	Units	TEFs	Screening Level	SED-SC-18-0-1-060112	SED-SC-18-2-2.25-060112	SED-SC-20-0-1-060112	SED-SC-20-2-2.5-060112	SED-SC-21-0-1-052512	SED-SC-21-2-4-052512	SED-SC-21-6-8-052512
					0 - 1 ft	2 - 2.5 ft	0 - 1 ft	2 - 2.5 ft	0 - 1 ft	2 - 4 ft	6 - 8 ft
Dioxin Furans - Dry Weight											
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	SW1613B	pg/g dw	1	0.05	**0.45** j	0.501 U	**1.13** j	**1.02**	**0.368** j	0.374 U	**0.969** j
Tetrachlorodibenzo-p-dioxin homologs (Total TCDD)	SW1613B	pg/g dw		--	**3.21**	**6.56**	**12.7**	**6.44**	**4.88**	**3.96**	**7.45**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	SW1613B	pg/g dw	1	--	**1.25** j	**2.01** j	**5.02** j	**1.97** j	**1.1** j	**0.912** j	**2.55** j
Pentachlorodibenzo-p-dioxin homologs (Total PeCDD)	SW1613B	pg/g dw		--	**12.4**	**16.3**	**37.6**	**14.4**	**7.49**	**7.08**	**16.8**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**2.51** j	**5.82** j	**8.23** j	**1.97** j	**1.94** j	**1.85** j	**2.95** j
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**12.3**	**19.5**	**56**	**9.69**	**7.38**	**6.17**	**13.7**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	SW1613B	pg/g dw	0.1	--	**8.81**	**17**	**21.4**	**8.45**	**6.1**	**5.29**	**10.4**
Hexachlorodibenzo-p-dioxin homologs (Total HxCDD)	SW1613B	pg/g dw		--	**109**	**215**	**286**	**93.8**	**65.7**	**55.9**	**117**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	SW1613B	pg/g dw	0.01	--	**402**	**646**	**1200**	**259**	**208**	**170**	**407**
Heptachlorodibenzo-p-dioxin homologs (Total HpCDD)	SW1613B	pg/g dw		--	**1180**	**1780**	**2590**	**614**	**570**	**448**	**969**
Octachlorodibenzo-p-dioxin (OCDD)	SW1613B	pg/g dw	0.0003	--	**8640**	**4050**	**6950**	**2300**	**1860** J	**1430** J	**3550**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	SW1613B	pg/g dw	0.1	--	**0.795**	**1.2** j	**2.39**	**0.624** j	**0.687** j	**0.648** j	**1.12**
Tetrachlorodibenzofuran homologs (Total TCDF)	SW1613B	pg/g dw		--	**18.8**	**34.8**	**49.7**	**18.7**	**18.6**	**16.5**	**25.9**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.03	--	**1.08** j	**1.35** j	**4.26** j	**0.529** j	**0.642** j	**0.598** j	**1.01** j
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	SW1613B	pg/g dw	0.3	--	**2.31** j	**2.5** j	**10.1** j	**1.23** j	**1.35** j	**1.17** j	**2.16** j
Pentachlorodibenzofuran homologs (Total PeCDF)	SW1613B	pg/g dw		--	**23.1**	**49.5**	**160**	**24.6**	**25.3**	**22.3**	**44.4**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**11.9**	**13.5**	**141**	**5.2**	**5.69**	**4.36** j	**8.32**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**3.07** j	**3.86** j	**24.4**	**1.84** j	**1.69** j	**1.59** j	**2.92** j
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**0.515** j	0.305 U	**29**	**0.144** j	0.129 U	0.126 U	0.359 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	SW1613B	pg/g dw	0.1	--	**2.02** j	**2.23** j	**8.96** j	**1.16** j	**1.07** j	**0.968** j	**2.06** j
Hexachlorodibenzofuran homologs (Total HxCDF)	SW1613B	pg/g dw		--	**134**	**149**	**952**	**66**	**63.1**	**54.1**	**111**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**88.5**	**88.1**	**470**	**34.8**	**44.1**	**32.3**	**62.8**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	SW1613B	pg/g dw	0.01	--	**10.3**	**8.96** j	**80.1**	**3.26** j	**3.63** j	**2.9** j	**5.76**
Heptachlorodibenzofuran homologs (Total HpCDF)	SW1613B	pg/g dw		--	**451**	**321**	**2330**	**142**	**178**	**117**	**279**
Octachlorodibenzofuran (OCDF)	SW1613B	pg/g dw	0.0003	--	**498**	**189**	**1000**	**84.6**	**183**	**94.5**	**224**
Dioxin Furan Calculated TEQ (ND=1/2 DL)		pg/g dw		**2**	**14.4**	**18.1**	**58.3**	**10.0**	**7.52**	**6.07**	**14.3**

PUBLIC REVIEW DRAFT
Table GG-5
Sediment Analytical Results Summary - Dioxins/Furans
5900 West Marginal Way Site
Seattle, Washington

Notes:
Empty cells = Not analyzed
ND = 1/2 DL = Non-detect values calculated as one-half the method detection limit.

As discussed in ERM's 28 June 2013 Memorandum, "Data Review of Reichhold-Glacier Archived Sediment Samples Collected May 2012," the laboratory identified several dioxin/furan results as estimated maximum possible concentrations (EMPC). An EMPC value is the maximum possible concentration of a compound that could be present in the sample. This classification is used when all of the identification criteria for a given dioxin or furan compound are not met. Samples where the EMPC classification was applied are identified in the Memorandum.
Bold *text indicates that compound was detected.*
Green-shaded, bolded values indicate detected concentration exceeds the selected screening level.
Archived = Samples were archived prior to analysis.
TEQ = Toxicity Equivalency Quotient to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD). Only positively identified compounds are included in TEQ calculation.

Key:
cm = centimeters
DUP = duplicate sample
dw = dry weight
ft = feet
LDW = Lower Duwamish Waterway
NA = not available, no screening value available
pg/g = picograms per gram (1E-12 g/g) equivalent to parts per trillion.
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample
TEFs = Toxicity Equivalency Factor values for mammals (Van den Berg et al. 2006)

Data Qualifiers:
j = The value reported is below the routine reporting limit and should be considered an estimate; qualifier reported by the laboratory.
U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.
J = Detected compound qualified as estimated.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	On-Site Samples										
		SED-01				SED-02						
		SED-SS-01	SED-SC-01	SED-SC-01	SED-SC-01	SED-SS-02	SED-SC-02	SED-SC-02	SED-SC-02	SED-SC-02	SED-SS-03	
		5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	5/22/2012	
		SED-SS-01-052212	SED-SC-01-0-1-053012	SED-SC-01-2-4-053012	DUP-053012-4	SED-SS-02-052312	SED-SC-02-0-1-052912	SED-SC-02-2-4-052912	SED-SC-02-6-8-052912	SED-SC-02-8-10-052912	SED-SS-03-052212	
		0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	6 - 8 ft	8 - 10 ft	0 - 10 cm	
Total organic carbon	%	**2.44**	**2.12**	**0.893**	**1.06**	**2.6**	**2.4**	**0.621**	**1.91**	**1.24** J-	**2.93**	
Total organic carbon	kg/kg	**0.0244**	**0.0212**	**0.00893**	**0.0106**	**0.026**	**0.024**	**0.00621**	**0.0191**	**0.0124** J-	**0.0293**	
Grain Size												
>10 Phi clay	%	**5.5**	**4.1**	**1.8**	**1.8**	**6.1**	**11.5**	**2.9**	**9.2**		**5.8**	
9-10 Phi clay	%	**3.5**	**2.5**	**1**	**0.9**	**4.2**	**5.5**	**1.1**	**4.2**		**4**	
8-9 Phi clay	%	**5.1**	**2.9**	**1.1**	**1.2**	**5.8**	**6.6**	**1.2**	**4.7**		**5.5**	
Very fine silt	%	**7.6**	**4.1**	**1.6**	**1.5**	**11.8**	**9.7**	**1.5**	**10.1**		**10.8**	
Fine silt	%	**10.5**	**4.9**	**1.7**	**1.7**	**18.5**	**13.8**	**2.1**	**23.9**		**16.5**	
Medium silt	%	**8.9**	**5**	**1.7**	**1.4**	**22.7**	**11.8**	**1.7**	**19.7**		**17.5**	
Coarse silt	%	**5.3**	**5.1**	**1.9**	**2.8**	**10.7**	**9.3**	**4.2**	**11.3**		**9.8**	
Fines (silt + clay)	%	**46.3**	**28.5**	**10.8**	**11.3**	**79.8**	**68.2**	**14.8**	**83**		**70**	
Very fine sand	%	**11.1**	**12**	**5.8**	**6**	**6.3**	**7.7**	**9.2**	**5.8**		**11.1**	
Fine sand	%	**18.6**	**23.9**	**19.4**	**19.2**	**4.3**	**7.3**	**26.5**	**3.4**		**6.5**	
Medium sand	%	**16**	**23.1**	**32.9**	**33.2**	**4.2**	**8.7**	**36.8**	**4.8**		**3.3**	
Coarse sand	%	**4.6**	**8.3**	**13.7**	**13.9**	**3.4**	**6.2**	**9.6**	**2.2**		**3.2**	
Very coarse sand	%	**2.2**	**3.3**	**6.7**	**6.9**	**1.7**	**1.4**	**2**	**0.4**		**3.1**	
Gravel	%	**1.2**	**1**	**10.6**	**9.6**	**0.2**	**0.5**	**1.2**	**0.4**		**2.7**	
Total Solids												
Total Solids	%	**57**	**60.7**	**79.6**	**78.8**	**43.7**	**44.8**	**76.8**	**58.5**		**43.8**	

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	SED-03					SED-04				
		SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SC-03	SED-SS-04	SED-SC-04	SED-SC-04	SED-SC-04	SED-SC-04
		5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012
		SED-SC-03-0-1-053012	SED-SC-03-2-4-053012	DUP-053012-3	SED-SC-03-4-6-053012	SED-SC-03-6-8-053012	SED-SS-04-052212	SED-SC-04-0-1-053012	SED-SC-04-1-2-053012	SED-SC-04-2-4-053012	SED-SC-04-4-6-053012
		0 - 1 ft	2 - 4 ft	2 - 4 ft	4 - 6 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft	4-6 ft
Total organic carbon	%	**3.31**	**1.53**	**2.2**	**1.73** J-	**0.362**	**2.21**	**1.82**	**1.84** J-	**1.36**	**0.552** J-
Total organic carbon	kg/kg	**0.0331**	**0.0153**	**0.022**	**0.0173** J-	**0.00362**	**0.0221**	**0.0182**	**0.0184** J-	**0.0136**	**0.00552** J-
Grain Size											
>10 Phi clay	%	**9.7**	**9.7**	**9.2**		2.6 U	**4.6**	**7.5**		**4.4**	
9-10 Phi clay	%	**4.1**	**5.1**	**4.6**		2.6 U	**3.1**	**3.7**		**1.7**	
8-9 Phi clay	%	**5.4**	**7.4**	**7.2**		2.6 U	**6**	**4.9**		**2.9**	
Very fine silt	%	**9.4**	**15.3**	**13.8**		2.6 U	**9.5**	**9**		**4.9**	
Fine silt	%	**13.1**	**20.8**	**20.7**		2.6 U	**12.9**	**15.4**		**7.1**	
Medium silt	%	**11.3**	**15.2**	**15.5**		2.6 U	**12.9**	**9.5**		**8.8**	
Coarse silt	%	**7.8**	**9**	**10.2**		2.6 U	**8.8**	**6.9**		**8.6**	
Fines (silt + clay)	%	**60.7**	**82.3**	**81.2**		**2.6**	**57.8**	**56.8**		**38.3**	
Very fine sand	%	**9.2**	**6.2**	**6.2**		**0.4**	**12.5**	**6.3**		**5.8**	
Fine sand	%	**9.8**	**4.3**	**4.3**		**1.5**	**11.4**	**7.1**		**2.6**	
Medium sand	%	**9**	**3.1**	**2.9**		**37.5**	**12.3**	**19.6**		**25.8**	
Coarse sand	%	**4.3**	**1.6**	**1.3**		**50**	**4.5**	**8.3**		**22.3**	
Very coarse sand	%	**1.7**	**0.8**	**0.4**		**6.7**	**1.4**	**1.1**		**4**	
Gravel	%	**5.2**	**1.6**	**3.7**		**1.4**	**0.1**	**0.7**		**1.2**	
Total Solids											
Total Solids	%	**46.3**	**60.9**	**61.3**		**84.3**	**52.2**	**65.4**		**77.6**	

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	On-Site Samples									
			SED-05								SED-06
		SED-SC-04	SED-SS-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SC-05	SED-SS-06	SED-SS-06	SED-SC-06	SED-SC-06
		5/30/2012	5/23/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/23/2012	5/23/2012	5/29/2012	5/29/2012
		SED-SC-04-6-7.1-053012	SED-SS-05-052312	SED-SC-05-0-1-060112	SED-SC-05-2-4-060112	SED-SC-05-4-6-060112	SED-SC-05-6-8-060112	SED-SS-06-052312	DUP-052312-1	SED-SC-06-0-1-052912	SED-SC-06-2-4-052912
		6 - 7.1 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 4 ft
Total organic carbon	%	**0.251**	**2.96**	**2.62**	**2.74**	**0.383** J-	**0.355**	**2.04**	**2.88**	**2.18**	**1.95**
Total organic carbon	kg/kg	**0.00251**	**0.0296**	**0.0262**	**0.0274**	**0.00383** J-	**0.00355**	**0.0204**	**0.0288**	**0.0218**	**0.0195**
Grain Size											
>10 Phi clay	%	2 U	**8.5**	**11.8**	**8.6**		**1.4**	**7.7**	**7.6**	**11.8**	**9.7**
9-10 Phi clay	%	2 U	**5.5**	**5.2**	**4**		**0.4**	**4.9**	**5.2**	**5.3**	**4.9**
8-9 Phi clay	%	2 U	**6.9**	**7.3**	**5.5**		**0.6**	**7.6**	**7.6**	**7.3**	**4.7**
Very fine silt	%	2 U	**13.8**	**14.1**	**10.6**		**1.1**	**15.4**	**13.7**	**12**	**9.4**
Fine silt	%	2 U	**18.5**	**27.8**	**21.1**		**2**	**22.8**	**22.3**	**19.4**	**25.3**
Medium silt	%	2 U	**15.7**	**18.3**	**16**		**3.5**	**21.5**	**21**	**19.5**	**15.8**
Coarse silt	%	2 U	**9.3**	**8.1**	**11**		**7.4**	**8.9**	**12.1**	**10.6**	**9.3**
Fines (silt + clay)	%	**2**	**78.2**	**92.6**	**76.8**		**16.4**	**88.9**	**89.4**	**85.9**	**79.1**
Very fine sand	%	**0.2**	**4.8**	**2.8**	**11.3**		**24.5**	**3.9**	**3.9**	**5.4**	**5**
Fine sand	%	**1.9**	**3.4**	**1**	**7.6**		**49.9**	**1.7**	**1.4**	**2**	**3.3**
Medium sand	%	**49.2**	**4.8**	**1**	**2.8**		**7.8**	**2**	**1.8**	**3.5**	**6**
Coarse sand	%	**41.4**	**3.6**	**1.3**	**1**		**0.5**	**2.3**	**2.5**	**1.9**	**2.7**
Very coarse sand	%	**4.3**	**3.4**	**0.9**	**0.3**		**0.3**	**1.2**	**0.8**	**0.8**	**2**
Gravel	%	**0.9**	**1.9**	**0.3**	**0.1**		**0.6**	0.1 U	**0.1**	**0.5**	**1.9**
Total Solids											
Total Solids	%	**82.8**	**45.4**	**49.3**	**55.4**		**77.2**	**43.4**	**43**	**47.9**	**49.7**

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	On-Site Samples									
					SED-07						
		SED-SC-06	SED-SC-06	SED-SC-06	SED-SS-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SC-07	SED-SS-08
		5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/22/2012
		SED-SC-06-4-6-052912	SED-SC-06-6-8-052912	SED-SC-06-8-10-052912	SED-SS-07-052212	SED-SC-07-0-1-053012	SED-SC-07-1-2-053012	SED-SC-07-2-4-053012	SED-SC-07-4-6-053012	SED-SC-07-6-8-053012	SED-SS-08-052212
		4-6 ft	6 - 8 ft	8-10 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm
Total organic carbon	%	**2.07** J-	**1.89**	**3.17** J-	**2.93**	**2.27**	**1.73** J-	**1.91**	**1.90** J-	**1.54**	**2.88**
Total organic carbon	kg/kg	**0.0207** J-	**0.0189**	**0.0317** J-	**0.0293**	**0.0227**	**0.0173** J-	**0.0191**	**0.019** J-	**0.0154**	**0.0288**
Grain Size											
>10 Phi clay	%		**15**		**8.6**	**10.9**		**9.8**		**8.5**	**9**
9-10 Phi clay	%		**6**		**5.5**	**4.9**		**4**		**3.8**	**5.6**
8-9 Phi clay	%		**9.3**		**8.1**	**7.7**		**6.2**		**5.9**	**8**
Very fine silt	%		**13.9**		**13.7**	**12.8**		**11.1**		**10.2**	**14**
Fine silt	%		**18.9**		**20.4**	**22.7**		**23.7**		**14.7**	**19.4**
Medium silt	%		**17.6**		**20.7**	**18**		**19.8**		**17.8**	**19.9**
Coarse silt	%		**7.9**		**8.9**	**10**		**9.8**		**20**	**9.1**
Fines (silt + clay)	%		**88.8**		**86**	**87.1**		**84.3**		**81**	**85**
Very fine sand	%		**3.2**		**4.3**	**5.8**		**5.7**		**13.6**	**4.7**
Fine sand	%		**1.3**		**1.6**	**2.6**		**2.9**		**2.4**	**1.5**
Medium sand	%		**1.7**		**3.3**	**2.1**		**3.4**		**1.3**	**3**
Coarse sand	%		**2.1**		**2.7**	**1.3**		**2.6**		**1**	**2.6**
Very coarse sand	%		**2.5**		**2**	**0.6**		**1**		**0.6**	**3.1**
Gravel	%		**0.4**		0.1 U	**0.4**		**0.1**		**0.1**	0.1 U
Total Solids											
Total Solids	%		**59.3**		**45**	**48.2**		**57.2**		**64**	**43.6**

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	On-Site Samples									
		SED-08						SED-09			
		SED-SS-08	SED-SC-08	SED-SC-08	SED-SC-08	SED-SC-08	SED-SC-08	SED-SS-09	SED-SC-09	SED-SC-09	SED-SC-09
		5/22/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012
		DUP-052212-1	SED-SC-08-0-1-053012	SED-SC-08-2-4-053012	DUP-053012-2	SED-SC-08-4-6-053012	SED-SC-08-6-8-053012	SED-SS-09-052312	SED-SC-09-0-1-052912	SED-SC-09-1-2-052912	SED-SC-09-2-4-052912
		0 - 10 cm	0 - 1 ft	2 - 4 ft	2 - 4 ft	4-6 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft
Total organic carbon	%	**2.9**	**1.96**	**1.64**	**1.92**	**1.54** J-	**1.92**	**2.7**	**2.24**	**2.18** J-	**2.64**
Total organic carbon	kg/kg	**0.029**	**0.0196**	**0.0164**	**0.0192**	**0.0154** J-	**0.0192**	**0.027**	**0.0224**	**0.0218** J-	**0.0264**
Grain Size											
>10 Phi clay	%	**8.8**	**9.2**	**11.6**	**12**		**2.1**	**6**	**14**		**10**
9-10 Phi clay	%	**5.7**	**4.4**	**5.3**	**5.7**		**0.9**	**3.6**	**5.6**		**4.8**
8-9 Phi clay	%	**8**	**4.1**	**6**	**5.9**		**1**	**6**	**9.1**		**6.9**
Very fine silt	%	**14**	**8**	**11**	**12.9**		**2.3**	**11.3**	**16.4**		**13.4**
Fine silt	%	**19.4**	**34.3**	**21.7**	**24**		**4.4**	**19.3**	**31.6**		**27.1**
Medium silt	%	**19**	**20.9**	**15.7**	**16.1**		**4.2**	**19.1**	**11.9**		**16.3**
Coarse silt	%	**10.3**	**7.6**	**7.4**	**9.2**		**3.4**	**13.3**	**4.3**		**9.8**
Fines (silt + clay)	%	**85.3**	**88.4**	**78.7**	**85.8**		**18.4**	**78.4**	**93**		**88.4**
Very fine sand	%	**4.9**	**5.4**	**8.4**	**7.2**		**3.5**	**8.3**	**2.3**		**3.6**
Fine sand	%	**1.8**	**2.5**	**4.3**	**3.4**		**6.9**	**4.4**	**0.7**		**1.2**
Medium sand	%	**2.5**	**2**	**3.2**	**2.5**		**30.4**	**4.9**	**0.6**		**1.1**
Coarse sand	%	**2.4**	**1.2**	**2.4**	**0.8**		**30.5**	**2.7**	**1.1**		**2**
Very coarse sand	%	**2.9**	**0.5**	**3**	**0.3**		**8.9**	**1.2**	**1**		**3.2**
Gravel	%	**0.1**	0.1 U	0.1 U	0.1 U		**1.4**	**0.1**	**1.3**		**0.5**
Total Solids											
Total Solids	%	**44.2**	**48.7**	**54.7**	**52.7**		**76.7**	**44.7**	**51**		**56.1**

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	SED-13			On-Site Samples						
			SED-13		SED-13						SED-14
		SED-SC-09	SED-SS-13	SED-SC-13	SED-SC-13	SED-SC-13	SED-SC-13	SED-SS-14	SED-SC-14	SED-SC-14	SED-SC-14
		5/29/2012	5/23/2012	5/31/2012	5/31/2012	5/31/2012	5/31/2012	5/23/2012	5/29/2012	5/29/2012	5/29/2012
		SED-SC-09-6-8-052912	SED-SS-13-052312	SED-SC-13-0-1-053112	SED-SC-13-2-4-053112	SED-SC-13-4-6-053112	SED-SC-13-6-7-053112	SED-SS-14-052312	SED-SC-14-0-1-052912	SED-SC-14-1-2-052912	SED-SC-14-2-4-052912
		6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	4-6 ft	6 - 7 ft	0 - 10 cm	0 - 1 ft	1-2 ft	2 - 4 ft
Total organic carbon	%	**1.68**	**2.71**	**2.22**	**1.49**	**1.42** J-	**2.02**	**2.75**	**2.02**	**1.79** J-	**1.45**
Total organic carbon	kg/kg	**0.0168**	**0.0271**	**0.0222**	**0.0149**	**0.0142** J-	**0.0202**	**0.0275**	**0.0202**	**0.0179** J-	**0.0145**
Grain Size											
>10 Phi clay	%	**6.8**	**7.2**	**7.5**	**7.7**		**3.3**	**0.7**	**6.7**		**7.3**
9-10 Phi clay	%	**2.7**	**4.8**	**3.3**	**3.3**		**1.8**	**0.5**	**3.2**		**3.2**
8-9 Phi clay	%	**4.4**	**7.4**	**3.8**	**3.9**		**3.5**	**0.7**	**4.7**		**5.3**
Very fine silt	%	**7.9**	**13.9**	**7.5**	**7.2**		**6**	**1**	**8.9**		**9.1**
Fine silt	%	**13.7**	**21.9**	**18.9**	**15.7**		**7.9**	**0.9**	**12.6**		**14.9**
Medium silt	%	**15.5**	**21.5**	**16.3**	**12.5**		**6.5**	**0.9**	**11.3**		**22.2**
Coarse silt	%	**15.5**	**11.7**	**13.4**	**6.7**		**4.1**	**3.9**	**10**		**18.1**
Fines (silt + clay)	%	**66.3**	**88.4**	**70.6**	**57**		**33.1**	**8.6**	**57.4**		**80.2**
Very fine sand	%	**10.5**	**4.3**	**10.7**	**5.7**		**4.1**	**3.9**	**16.1**		**7.4**
Fine sand	%	**2**	**1.7**	**8.7**	**6.3**		**4.9**	**12.6**	**13.3**		**4.1**
Medium sand	%	**9.9**	**1.9**	**7.2**	**16.6**		**22.8**	**19.1**	**8.6**		**4.5**
Coarse sand	%	**9.6**	**2.4**	**2.2**	**9.7**		**26.9**	**10.9**	**2.6**		**1.9**
Very coarse sand	%	**1**	**1.3**	**0.5**	**2.8**		**6.1**	**5.6**	**0.8**		**0.6**
Gravel	%	**0.6**	0.1 U	0.1 U	**1.9**		**2**	**39.3**	**1.2**		**1.1**
Total Solids											
Total Solids	%	**69.3**	**42.5**	**51.8**	**57.6**		**75.3**	**77.4**	**66.2**		**71.2**

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	On-Site Samples									
					SED-15			SED-16			
		SED-SC-14	SED-SC-14	SED-SC-14	SED-SS-15	SED-SC-15	SED-SC-15	SED-SS-16	SED-SC-16	SED-SC-16	SED-SC-16
		5/29/2012	5/29/2012	5/29/2012	5/22/2012	5/31/2012	5/31/2012	5/22/2012	5/31/2012	5/31/2012	5/31/2012
		SED-SC-14-4-6-052912	SED-SC-14-6-8-052912	DUP-052912-2	SED-SS-15-052212	SED-SC-15-0-1-053112	SED-SC-15-2-4-053112	SED-SS-16-052212	SED-SC-16-0-1-053112	SED-SC-16-2-3.5-053112	DUP-053112-2
		4-6 ft	6 - 8 ft	6 - 8 ft	0 - 10 cm	0 - 1 ft	2 - 4 ft	0 - 10 cm	0 - 1 ft	2 - 3.5 ft	2 - 3.5 ft
Total organic carbon	%	**1.55** J-	**3.75**	**2.9**	**2.32**	**1.75**	**1.88**	**2.2**	**2.07**	**2.17**	**2.32**
Total organic carbon	kg/kg	**0.0155** J-	**0.0375**	**0.029**	**0.0232**	**0.0175**	**0.0188**	**0.022**	**0.0207**	**0.0217**	**0.0232**
Grain Size											
>10 Phi clay	%		2.5 U	2.6 U	**3.1**	**2.2**	**4.9**	**4.2**	**3.3**	**4.4**	**4.7**
9-10 Phi clay	%		2.5 U	2.6 U	**2.5**	**1.1**	**2.7**	**3**	**2.4**	**2.8**	**2.8**
8-9 Phi clay	%		2.5 U	2.6 U	**4.7**	**1.3**	**4**	**4.6**	**3**	**4.1**	**4**
Very fine silt	%		2.5 U	2.6 U	**6.5**	**2.2**	**6.6**	**6.4**	**6.3**	**7**	**7.8**
Fine silt	%		2.5 U	2.6 U	**8.5**	**2.9**	**9.8**	**10**	**11.9**	**11**	**10.3**
Medium silt	%		2.5 U	2.6 U	**8.1**	**4.2**	**8**	**11.2**	**9.5**	**11.2**	**9.8**
Coarse silt	%		2.5 U	2.6 U	**7.6**	**11.6**	**9.1**	**9.7**	**9.9**	**9.9**	**12**
Fines (silt + clay)	%		**2.5**	**2.6**	**41**	**25.4**	**45**	**49**	**46.5**	**50.4**	**51.5**
Very fine sand	%		**0.4**	**0.5**	**13.6**	**22.5**	**12.1**	**20**	**17.4**	**8.9**	**7.6**
Fine sand	%		**1.3**	**1.3**	**15.5**	**19.6**	**19.2**	**14.4**	**15.7**	**5.4**	**5**
Medium sand	%		**43.1**	**43**	**17.6**	**13.5**	**14.6**	**8**	**10.2**	**13.2**	**13.1**
Coarse sand	%		**46.7**	**47**	**8.1**	**8**	**4.2**	**5**	**7.2**	**17.4**	**17.9**
Very coarse sand	%		**4.7**	**4.3**	**1.4**	**3.2**	**2.2**	**2.1**	**1.7**	**4.3**	**4.2**
Gravel	%		**1.2**	**1.4**	**2.9**	**7.8**	**2.8**	**1.5**	**1.5**	**0.2**	**0.7**
Total Solids											
Total Solids	%		**83.6**	**84.8**	**51.8**	**70.9**	**66**	**55.5**	**56.6**	**69.8**	**71.1**

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	SED-17				SED-18	SED-19	SED-22			
		SED-SS-17	SED-SC-17	SED-SC-17	SED-SC-17	SED-SS-18	SED-SS-19	SED-SS-22	B4A	DR122	DR124
		5/23/2012	5/30/2012	5/30/2012	5/30/2012	5/23/2012	5/23/2012	5/23/2012	8/15/2004	9/14/1998	9/15/1998
		SED-SS-17-052312	SED-SC-17-0-1-053012	SED-SC-17-2-4-053012	SED-SC-17-4-5-053012	SED-SS-18-052312	SED-SS-19-052312	SED-SS-22-052312	LDW-B4A-S	SD-DR122-0000	SD-DR124-0000
		0 - 10 cm	0 - 1 ft	2 - 4 ft	4-5 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Total organic carbon	%	**3.33**	**2.27**	**1.52**	**1** J-	**3.42**	**2.89**	**1.69**	**1.96**	**2.18**	**2.78**
Total organic carbon	kg/kg	**0.0333**	**0.0227**	**0.0152**	**0.01** J-	**0.0342**	**0.0289**	**0.0169**	**0.0196**	**0.0218**	**0.0278**
Grain Size											
>10 Phi clay	%	**6.5**	**5.8**	**7.7**		**10**	**7**	**4.7**	**3.38**	**11.33**	**3.12** J
9-10 Phi clay	%	**3.9**	**3.2**	**2.9**		**5.5**	**4.5**	**3.2**	**1.38**	**5.03**	**1.7** J
8-9 Phi clay	%	**5.8**	**2.9**	**3.2**		**7.9**	**7**	**5.6**	**2.66**	**8.57**	**2.54** J
Very fine silt	%	**10.1**	**6.4**	**5**		**14.1**	**11.2**	**8.4**	**3.02**	**15.06**	**3.79** J
Fine silt	%	**16.3**	**22.5**	**6.8**		**17.9**	**17.5**	**10.2**	**5.14**	**19.84**	**5.4** J
Medium silt	%	**18.1**	**14.8**	**6**		**16.6**	**18.6**	**8.9**	**9.64**	**21.1**	**5.5** J
Coarse silt	%	**10.5**	**7.9**	**3.6**		**7.8**	**15.3**	**12**	**8.97**	**9.14**	**2.12** J
Fines (silt + clay)	%	**71**	**63.4**	**35.2**		**79.8**	**81.1**	**53**	**34.19**	**90.1**	**24.2** J
Very fine sand	%	**7**	**6.2**	**4.4**		**4.8**	**7.2**	**16.7**	**14.7**	**4.39**	**6.45**
Fine sand	%	**6.2**	**8.8**	**9.6**		**2.1**	**3.5**	**11.4**	**17.6**	**2.02**	**4.66**
Medium sand	%	**8.3**	**13.9**	**21.4**		**3.9**	**3.4**	**9.4**	**16.9**	**1.89**	**2.77**
Coarse sand	%	**5**	**6.5**	**21.1**		**3.7**	**2.6**	**6.3**	**7.64**	**1.28**	**0.81**
Very coarse sand	%	**2.3**	**1**	**4.8**		**5.3**	**1.9**	**2**	**3.31**	**0.34**	**0.77**
Gravel	%	0.1 U	**0.2**	**3.3**		**0.3**	**0.2**	**1.2**	**10.7**	0.01 U	**60.36**
Total Solids											
Total Solids	%	**45.7**	**50.6**	**55.8**		**46.1**	**44.9**	**53.2**			

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	On-Site Samples								
		LDW Samples								SED-10
		LDW-SC29	LDW-SC29	LDW-SC29	LDW-SS56	LDW-SS57	LDW-SS58	LDW-SS59	LDW-SSB4A	SED-SS-10
		2/21/2006	2/21/2006	2/21/2006	1/24/2005	1/24/2005	1/24/2005	3/14/2005	3/14/2005	5/24/2012
		LDW-SC29-0-1	LDW-SC29-1-2	LDW-SC29-2-3.6	LDW-SS56-010	LDW-SS57-010	LDW-SS58-010	LDW-SS59R2-010	LDW-SSB4A-010	SED-SS-10-052412
		0 - 1 ft	1 - 2 ft	2 - 3.6 ft	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Total organic carbon	%	**1.77**	**1.06**	**0.48**	**1.13**	**1.73**	**1.78**	**2.07**	**1.82**	**1.92**
Total organic carbon	kg/kg	**0.0177**	**0.0106**	**0.0048**	**0.0113**	**0.0173**	**0.0178**	**0.0207**	**0.0182**	**0.0192**
Grain Size										
>10 Phi clay	%	**5**	**2.4**		**3.6**	**9.4**	**9.4**	**3.7**	**5.4**	**9.5**
9-10 Phi clay	%	**2.6**	**1.1**		**1.2**	**3.4**	**3.8**	**2**	**2.3**	**5.7**
8-9 Phi clay	%	**3**	**1.3**		**2.3**	**4.4**	**6**	**2.6**	**3.5**	**6.9**
Very fine silt	%	**5.1**	**2.9**		**2.3**	**6.6**	**9.1**	**4.7**	**5.3**	**13.9**
Fine silt	%	**8.1**	**5.1**		**3.8**	**15**	**13.2**	**6.4**	**6.2**	**17.8**
Medium silt	%	**7.1**	**6.2**		**4.5**	**16.5**	**14.8**	**7**	**7.6**	**18.8**
Coarse silt	%	**12.5**	**6.5**	**3.4**	**3.6**	**13.7**	**9.9**	**5.7**	**12**	**8.4**
Fines (silt + clay)	%	**43.4**	**25.5**	**3.4**	**21.3**	**69**	**66.2**	**32.1**	**42**	**81**
Very fine sand	%	**9.1**	**4.4**	**0.7**	**19.1**	**12.9**	**11.4**	**10**	**25.7**	**4.4**
Fine sand	%	**6.6**	**3.1**	**2.6**	**21.6**	**7.4**	**7.4**	**9.2**	**20.5**	**1.5**
Medium sand	%	**26.9**	**37**	**47.4**	**20**	**7.3**	**9.4**	**5.6**	**8**	**3.5**
Coarse sand	%	**12.6**	**26.9**	**39.2**	**9.7**	**2.5**	**4**	**1.9**	**2.5**	**6**
Very coarse sand	%	**0.9**	**2.6**	**5.8**	**2.4**	**0.7**	**0.6**	**1.7**	**0.6**	**3.5**
Gravel	%	**0.6**	**0.3**	**0.9**	**5.9**	**0.1**	**1**	**39.6**	**0.6**	0.1 U
Total Solids										
Total Solids	%									**42**

Notes:
Empty cells = Not analyzed
Bold *text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

PUBLIC REVIEW DRAFT
Table GG-6
Sediment Analytical Results Summary - Conventionals
5900 West Marginal Way Site
Seattle, Washington

Constituent	Units	Off-Site Samples										
		SED-11		SED-12	SED-18		SED-20		SED-21			
		SED-SS-11	SED-SS-11	SED-SS-12	SED-SC-18	SED-SC-18	SED-SC-20	SED-SC-20	SED-SC-21	SED-SC-21	SED-SC-21	
		5/25/2012	5/25/2012	5/24/2012	6/1/2012	6/1/2012	6/1/2012	6/1/2012	5/25/2012	5/25/2012	5/25/2012	
		SED-SS-11-052512	DUP-052512-1	SED-SS-12-052412	SED-SC-18-0-1-060112	SED-SC-18-2-2.25-060112	SED-SC-20-0-1-060112	SED-SC-20-2-2.5-060112	SED-SC-21-0-1-052512	SED-SC-21-2-4-052512	SED-SC-21-6-8-052512	
		0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 1 ft	2 - 2.25 ft	0 - 1 ft	2 - 2.5 ft	0 - 1 ft	2 - 4 ft	6 - 8 ft	
Total organic carbon	%	**6.53**	**10.6**	**2.32**	**2.31**	**2.76**	**2.18**	**1.66**	**12.5**	**4.24**	**12.1**	
Total organic carbon	kg/kg	**0.0653**	**0.106**	**0.0232**	**0.0231**	**0.0276**	**0.0218**	**0.0166**	**0.125**	**0.0424**	**0.121**	
Grain Size												
>10 Phi clay	%	**8.3**	**9.1**	**10.1**	**11.6**	**11.7**	**8.5**	**20**	**10.1**	**11.3**	**19.7**	
9-10 Phi clay	%	**4.5**	**4.6**	**4.9**	**5.1**	**5.4**	**4**	**9**	**3.7**	**5.6**	**8.4**	
8-9 Phi clay	%	**6.2**	**7.4**	**7.3**	**7.7**	**7.2**	**4.3**	**11.6**	**5**	**7.7**	**11.7**	
Very fine silt	%	**11.7**	**12.1**	**13.6**	**13.8**	**13.6**	**8.4**	**16.2**	**10.9**	**12.9**	**14.9**	
Fine silt	%	**16.7**	**18.3**	**20.4**	**21.2**	**19.3**	**23.1**	**12.8**	**19**	**16.8**	**16.7**	
Medium silt	%	**17**	**17.5**	**21.6**	**19.8**	**2.8**	**15.4**	**11.3**	**22.5**	**17**	**10.8**	
Coarse silt	%	**12.5**	**13.3**	**10.7**	**11.3**	**8.7**	**10.1**	**9.3**	**14.6**	**12.5**	**8.7**	
Fines (silt + clay)	%	**77**	**82.4**	**88.7**	**90.5**	**88.8**	**73.8**	**90.1**	**85.6**	**83.7**	**90.9**	
Very fine sand	%	**6.5**	**6**	**4.8**	**4.2**	**4.9**	**6.4**	**4**	**5.1**	**8.1**	**4.5**	
Fine sand	%	**2.3**	**2**	**1.4**	**0.7**	**1.1**	**2.5**	**0.9**	**2.2**	**2**	**1.3**	
Medium sand	%	**5.2**	**3.4**	**1.5**	**0.7**	**1**	**3.1**	**1.6**	**2.9**	**2.8**	**1.4**	
Coarse sand	%	**6.3**	**3.8**	**2.4**	**1.9**	**0.8**	**2.3**	**0.8**	**2.5**	**2.1**	**1.4**	
Very coarse sand	%	**2.7**	**2.3**	**1.3**	**2**	**2.6**	**2**	**0.3**	**1.7**	**1.3**	**0.5**	
Gravel	%	0.1 U	0.1 U	0.1 U	**0.1**	**0.7**	**9.9**	**2.2**	0.1 U	0.1 U	0.1 U	
Total Solids												
Total Solids	%	**44.7**	**46**	**44.2**	**43.8**	**48.9**	**56.2**	**54.7**	**31.9**	**50.7**	**53**	

Notes:
Empty cells = Not analyzed
***Bold** text indicates that compound was detected.*
All depths below mudline

Key:
% = percent
cm = centimeters
ft = feet
kg/kg = kilograms per kilogram
LDW = Lower Duwamish Waterway
SC = sediment core sample
SED = sediment sample
SS = surface sediment sample

Data Qualifiers:
- = Compound concentration biased low
J = Detected compound qualified as estimated

U = Result is ≤ the detection limit. Organic compounds are reported to the Method Detection Limit (MDL) and water quality parameters and metals are reported to the Reporting Limit (RL). Results reported as the MDL or RL are qualified as non detected. If qualified as non-detect due to a detection in associated blank samples, then MDL/RL has been revised.

APPENDIX HH 2023 MAINTENANCE DREDGING SAMPLES LABORATORY ANALYTICAL REPORTS

Anchor QEA, LLC

130 Battery Street, Suite 400
San Francisco, CA 94111

CalPortland Maintenance

Client Project: 200217-01.01
Samples Received: 2/18/2023

Analytical Report
0223-776

EPA Method 1613B
PCDD/PCDF

Report Issue Date: 2/20/2023

I certify that to the best of my knowledge all analytical data presented in this report have been checked for completeness, accuracy, errors and legibility in addition to having been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s). This analytical report was prepared in Portable Document Format (.PDF) and contains 18 pages. This report shall not be reproduced except in full without approval of the laboratory. This will provide assurance that parts of the report are not taken out of context.

Signature:

Digitally signed by Bryan Vining
DN: C=US, O="Enthalpy Analytical, LLC", CN=Bryan Vining, E=bryan.vining@enthalpy.com
Reason: I have reviewed this document
Location: Wilimington, NC
Date: 2023.02.20 11:32:39-05'00'
Foxit PDF Editor Version: 11.2.2

Amendments:

ENTHALPY ANALYTICAL

Enthalpy Analytical, LLC – Ultratrace
Mark Hager, Project Manager
O: 910-876-6894 / F: 910-212-6886
mark.hager@enthalpy.com / www.enthalpy.co
2714 Exchange Drive, Wilmington, NC 28405

Summary of Results

Enthalpy Analytical

Job No.: 0223-776-1 EPA Method 1613B Solid

Anchor QEA, LLC Client Project: 200217-01.01 Site: CalPortland Maintenance

Summary

	Compound	CAS	CPMD-SS-01-021323 pg/g	CPMD-SS-02-021323 pg/g
TCDD	2378-TCDD (S)	1746-01-6	0.540 J-EMPC	0.608 J
PeCDD	12378-PeCDD (S)	40321-76-4	1.77 J	1.74 J
HxCDD	123478-HxCDD (S)	39227-28-6	3.18 J	3.27
	123678-HxCDD (S)	57653-85-7	11.5	14.7
	123789-HxCDD (S)	19408-74-3	6.15	6.61
HpCDD	1234678-HpCDD (S)	35822-46-9	366	458
OCDD	OCDD (S)	3268-87-9	3350	4280
TCDF	2378-TCDF (S)	51207-31-9	1.33	1.38
PeCDF	12378-PeCDF (S)	57117-41-6	1.10 J	1.51 J
	23478-PeCDF (S)	57117-31-4	5.03	6.40
HxCDF	123478-HxCDF (S)	70648-26-9	11.2	16.0
	123678-HxCDF (S)	57117-44-9	3.38	4.24
	234678-HxCDF (S)	60851-34-5	4.56	5.97
	123789-HxCDF (S)	72918-21-9	ND U	ND U
HpCDF	1234678-HpCDF (S)	67562-39-4	74.8	98.9
	1234789-HpCDF (S)	55673-89-7	6.93	8.68
OCDF	OCDF (S)	39001-02-0	273	323

TCDD group total	41903-57-5	6.56	7.47
PeCDD group total	36088-22-9	15.8	18.0
HxCDD group total	34465-46-8	106	124
HpCDD group total	37871-00-4	873	1115
OCDD group total		3348	4278
TCDF group total	55722-27-5	34.0	40.0
PeCDF group total	30402-15-4	42.5	56.9
HxCDF group total	55684-94-1	114	154
HpCDF group total	38998-75-3	312	380
OCDF group total		273	323

TEQ	ITEQ (ND=0; EMPC=0)	15.7	20.2
	ITEQ (ND=1/2EDL;EMPC=1/2EDL)	15.8	20.3
	ITEQ (ND=EDL EMPC=EDL)	15.8	20.3
	ITEQ (ND=0; EMPC=EMPC)	16.2	20.2
	ITEQ (ND=1/2EDL; EMPC=EMPC)	16.2	20.3
	ITEQ (ND=EDL; EMPC=EMPC)	16.3	20.3
	WTEQ (ND=0; EMPC=0)	13.0	16.6
	WTEQ (ND=1/2EDL;EMPC=1/2EDL)	13.1	16.6
	WTEQ (ND=EDL EMPC=EDL)	13.2	16.6
	WTEQ (ND=0; EMPC=EMPC)	13.5	16.6
	WTEQ (ND=1/2EDL; EMPC=EMPC)	13.6	16.6
	WTEQ (ND=EDL; EMPC=EMPC)	13.6	16.6

Detailed Results

Enthalpy Analytical

Job No.: 0223-776-1 EPA Method 1613B Solid

Anchor QEA, LLC Client Project: 200217-01.01 Site: CalPortland Maintenance

Enthalpy ID	0223-776-001-1	Prep Batch	EU14753	Extracted Mass (g)	18.29
Sample Name	CPMD-SS-01-021323	Prep Date	2023-02-18 13:30	Extract Vol (mL)	0.02
Matrix	Solid	Analysis Date	2023-02-19 13:42	Split Factor	N/A
Sampling Date	2023-02-13 09:32	Analyst	bahager	% Solids	42.9%
Received Date	2023-02-18 12:00	Instrument	Gandalf	Dry Weight Equiv. (g)	7.84

	Compound	CAS	Extract Concentration pg/uL	Sample Concentration pg/g	Formatted Result pg/g	LOQ pg/g	EDL pg/g	Recovery Limits	Recovery	Flags
TCDD	2378-TCDD (S)	1746-01-6	0.21	0.540	0.540	0.638	0.130			J-EMPC
PeCDD	12378-PeCDD (S)	40321-76-4	0.69	1.77	1.77	3.19	0.293			J
HxCDD	123478-HxCDD (S)	39227-28-6	1.25	3.18	3.18	3.19	0.415			J
	123678-HxCDD (S)	57653-85-7	4.52	11.5	11.5	3.19	0.369			
	123789-HxCDD (S)	19408-74-3	2.41	6.15	6.15	3.19	0.367			
HpCDD	1234678-HpCDD (S)	35822-46-9	143.44	366	366	3.19	0.859			
OCDD	OCDD (S)	3268-87-9	1312.07	3348	3350	6.38	1.21			
TCDF	2378-TCDF (S)	51207-31-9	0.52	1.33	1.33	0.638	0.198			
PeCDF	12378-PeCDF (S)	57117-41-6	0.43	1.10	1.10	3.19	0.195			J
	23478-PeCDF (S)	57117-31-4	1.97	5.03	5.03	3.19	0.218			
HxCDF	123478-HxCDF (S)	70648-26-9	4.39	11.2	11.2	3.19	0.251			
	123678-HxCDF (S)	57117-44-9	1.32	3.38	3.38	3.19	0.253			
	234678-HxCDF (S)	60851-34-5	1.79	4.56	4.56	3.19	0.280			
	123789-HxCDF (S)	72918-21-9	ND	ND	ND	3.19	0.319			U
HpCDF	1234678-HpCDF (S)	67562-39-4	29.30	74.8	74.8	3.19	0.374			
	1234789-HpCDF (S)	55673-89-7	2.71	6.93	6.93	3.19	0.482			
OCDF	OCDF (S)	39001-02-0	106.87	273	273	6.38	0.428			
ES	13C-2378-TCDD (ES)	76523-40-5	70.80	181			0.411	25-175%	70.8%	
	13C-12378-PeCDD (ES)	109719-79-1	63.25	161			0.411	25-181%	63.2%	
	13C-123478-HxCDD (ES)	109719-80-4	70.33	179			0.781	32-141%	70.3%	
	13C-123678-HxCDD (ES)	109719-81-5	84.84	216			0.828	28-130%	84.8%	
	13C-123789-HxCDD (ES)	109719-82-6	75.02	191			0.734	20-150%	75.0%	
	13C-1234678-HpCDD (ES)	109719-83-7	86.23	220			0.708	26-140%	86.2%	
	13C-OCDD (ES)	114423-97-1	154.33	394			0.653	17-156.5%	77.2%	
	13C-2378-TCDF (ES)	89059-46-1	64.88	166			0.462	24-152%	64.9%	
	13C-12378-PeCDF (ES)	109719-77-9	61.88	158			0.465	24-185%	61.9%	
	13C-23478-PeCDF (ES)	116843-02-8	59.78	153			0.481	21-178%	59.8%	
	13C-123478-HxCDF (ES)	114423-98-2	80.96	207			1.03	26-152%	81.0%	
	13C-123678-HxCDF (ES)	116843-03-9	75.24	192			0.860	26-123%	75.2%	
	13C-234678-HxCDF (ES)	116843-05-1	74.39	190			0.946	28-136%	74.4%	
	13C-123789-HxCDF (ES)	116843-04-0	75.42	192			1.04	29-147%	75.4%	
	13C-1234678-HpCDF (ES)	109719-84-8	86.77	221			0.905	28-143%	86.8%	
	13C-1234789-HpCDF (ES)	109719-94-0	81.07	207			1.00	26-138%	81.1%	
	13C-OCDF (ES)	109719-78-0	171.32	437			0.485	20-150%	85.7%	
CS	37Cl-2378-TCDD (CS)		50.97	130			0.122	39-154%	127.4%	
	13C-12347-PeCDD (CS)		60.65	155			0.382	20-150%	60.7%	
	13C-12346-PeCDF (CS)		67.73	173			0.467	20-150%	67.7%	
	13C-123469-HxCDF (CS)		82.03	209			0.993	20-150%	82.0%	
	13C-1234689-HpCDF (CS)		94.49	241			0.911	20-150%	94.5%	
AS	13C-1368-TCDD (AS)		73.83	188			0.370	20-150%	73.8%	
	13C-1368-TCDF (AS)		70.39	180			0.400	20-150%	70.4%	

TCDD group total:		41903-57-5	2.57	6.56			0.130			
PeCDD group total:		36088-22-9	6.18	15.8			0.293			
HxCDD group total:		34465-46-8	41.40	106			0.384			
HpCDD group total:		37871-00-4	341.98	873			0.859			
OCDD group total:			1312.07	3348			1.21			
TCDF group total:		55722-27-5	13.32	34.0			0.198			
PeCDF group total:		30402-15-4	16.66	42.5			0.206			
HxCDF group total:		55684-94-1	44.78	114			0.276			
HpCDF group total:		38998-75-3	122.29	312			0.428			
OCDF group total:			106.87	273			0.428			

TEQ	ITEQ (ND=0; EMPC=0)			15.7						
	ITEQ (ND=1/2EDL;EMPC=1/2EDL)			15.8						
	ITEQ (ND=EDL EMPC=EDL)			15.8						
	ITEQ (ND=0; EMPC=EMPC)			16.2						
	ITEQ (ND=1/2EDL; EMPC=EMPC)			16.2						
	ITEQ (ND=EDL; EMPC=EMPC)			16.3						
	WTEQ (ND=0; EMPC=0)			13.0						
	WTEQ (ND=1/2EDL;EMPC=1/2EDL)			13.1						
	WTEQ (ND=EDL EMPC=EDL)			13.2						
	WTEQ (ND=0; EMPC=EMPC)			13.5						
	WTEQ (ND=1/2EDL; EMPC=EMPC)			13.6						
	WTEQ (ND=EDL; EMPC=EMPC)			13.6						

Enthalpy Analytical

Job No.: 0223-776-1 EPA Method 1613B Solid

Anchor QEA, LLC Client Project: 200217-01.01 Site: CalPortland Maintenance

Enthalpy ID	0223-776-002-1	Prep Batch	EU14753	Extracted Mass (g)	19.2
Sample Name	CPMD-SS-02-021323	Prep Date	2023-02-18 13:30	Extract Vol (mL)	0.02
Matrix	Solid	Analysis Date	2023-02-19 14:33	Split Factor	N/A
Sampling Date	2023-02-13 10:38	Analyst	bahager	% Solids	42.7%
Received Date	2023-02-18 12:00	Instrument	Gandalf	Dry Weight Equiv. (g)	8.19

	Compound	CAS	Extract Concentration pg/uL	Sample Concentration pg/g	Formatted Result pg/g	LOQ pg/g	EDL pg/g	Recovery Limits	Recovery	Flags
TCDD	2378-TCDD (S)	1746-01-6	0.25	0.608	0.608	0.611	0.133			J
PeCDD	12378-PeCDD (S)	40321-76-4	0.71	1.74	1.74	3.05	0.275			J
HxCDD	123478-HxCDD (S)	39227-28-6	1.34	3.27	3.27	3.05	0.376			
	123678-HxCDD (S)	57653-85-7	6.04	14.7	14.7	3.05	0.340			
	123789-HxCDD (S)	19408-74-3	2.71	6.61	6.61	3.05	0.359			
HpCDD	1234678-HpCDD (S)	35822-46-9	187.75	458	458	3.05	1.09			
OCDD	OCDD (S)	3268-87-9	1751.80	4278	4280	6.11	1.76			
TCDF	2378-TCDF (S)	51207-31-9	0.57	1.38	1.38	0.611	0.107			
PeCDF	12378-PeCDF (S)	57117-41-6	0.62	1.51	1.51	3.05	0.275			J
	23478-PeCDF (S)	57117-31-4	2.62	6.40	6.40	3.05	0.289			
HxCDF	123478-HxCDF (S)	70648-26-9	6.55	16.0	16.0	3.05	0.295			
	123678-HxCDF (S)	57117-44-9	1.74	4.24	4.24	3.05	0.320			
	234678-HxCDF (S)	60851-34-5	2.44	5.97	5.97	3.05	0.311			
	123789-HxCDF (S)	72918-21-9	ND	ND	ND	3.05	0.382			U
HpCDF	1234678-HpCDF (S)	67562-39-4	40.49	98.9	98.9	3.05	0.429			
	1234789-HpCDF (S)	55673-89-7	3.55	8.68	8.68	3.05	0.536			
OCDF	OCDF (S)	39001-02-0	132.32	323	323	6.11	0.517			
ES	13C-2378-TCDD (ES)	76523-40-5	69.75	170			0.450	25-175%	69.8%	
	13C-12378-PeCDD (ES)	109719-79-1	63.95	156			0.542	25-181%	64.0%	
	13C-123478-HxCDD (ES)	109719-80-4	76.71	187			0.592	32-141%	76.7%	
	13C-123678-HxCDD (ES)	109719-81-5	87.47	214			0.627	28-130%	87.5%	
	13C-123789-HxCDD (ES)	109719-82-6	78.28	191			0.556	20-150%	78.3%	
	13C-1234678-HpCDD (ES)	109719-83-7	82.28	201			0.604	26-140%	82.3%	
	13C-OCDD (ES)	114423-97-1	125.03	305			0.526	17-156.5%	62.5%	
	13C-2378-TCDF (ES)	89059-46-1	63.66	155			0.544	24-152%	63.7%	
	13C-12378-PeCDF (ES)	109719-77-9	60.39	147			0.560	24-185%	60.4%	
	13C-23478-PeCDF (ES)	116843-02-8	60.91	149			0.579	21-178%	60.9%	
	13C-123478-HxCDF (ES)	114423-98-2	85.94	210			1.02	26-152%	85.9%	
	13C-123678-HxCDF (ES)	116843-03-9	75.89	185			0.852	26-123%	75.9%	
	13C-234678-HxCDF (ES)	116843-05-1	78.25	191			0.937	28-136%	78.3%	
	13C-123789-HxCDF (ES)	116843-04-0	77.21	189			1.03	29-147%	77.2%	
	13C-1234678-HpCDF (ES)	109719-84-8	82.85	202			1.16	28-143%	82.8%	
	13C-1234789-HpCDF (ES)	109719-94-0	77.43	189			1.28	26-138%	77.4%	
	13C-OCDF (ES)	109719-78-0	135.09	330			0.738	20-150%	67.5%	
CS	37Cl-2378-TCDD (CS)		53.29	130			0.153	39-154%	133.2%	
	13C-12347-PeCDD (CS)		63.21	154			0.503	20-150%	63.2%	
	13C-12346-PeCDF (CS)		70.61	172			0.563	20-150%	70.6%	
	13C-123469-HxCDF (CS)		89.67	219			0.983	20-150%	89.7%	
	13C-1234689-HpCDF (CS)		95.43	233			1.17	20-150%	95.4%	
AS	13C-1368-TCDD (AS)		73.55	180			0.405	20-150%	73.6%	
	13C-1368-TCDF (AS)		69.58	170			0.470	20-150%	69.6%	

TCDD group total:		41903-57-5	3.06	7.47			0.133			
PeCDD group total:		36088-22-9	7.37	18.0			0.275			
HxCDD group total:		34465-46-8	50.88	124			0.358			
HpCDD group total:		37871-00-4	456.44	1115			1.09			
OCDD group total:			1751.80	4278			1.76			
TCDF group total:		55722-27-5	16.39	40.0			0.107			
PeCDF group total:		30402-15-4	23.30	56.9			0.282			
HxCDF group total:		55684-94-1	63.05	154			0.327			
HpCDF group total:		38998-75-3	155.72	380			0.483			
OCDF group total:			132.32	323			0.517			

TEQ	ITEQ (ND=0; EMPC=0)		20.2						
	ITEQ (ND=1/2EDL;EMPC=1/2EDL)		20.3						
	ITEQ (ND=EDL EMPC=EDL)		20.3						
	ITEQ (ND=0; EMPC=EMPC)		20.2						
	ITEQ (ND=1/2EDL; EMPC=EMPC)		20.3						
	ITEQ (ND=EDL; EMPC=EMPC)		20.3						
	WTEQ (ND=0; EMPC=0)		16.6						
	WTEQ (ND=1/2EDL;EMPC=1/2EDL)		16.6						
	WTEQ (ND=EDL EMPC=EDL)		16.6						
	WTEQ (ND=0; EMPC=EMPC)		16.6						
	WTEQ (ND=1/2EDL; EMPC=EMPC)		16.6						
	WTEQ (ND=EDL; EMPC=EMPC)		16.6						

QC Data

Enthalpy Analytical

Job No.: 0223-776-1 EPA Method 1613B Solid

Anchor QEA, LLC Client Project: 200217-01.01 Site: CalPortland Maintenance

Enthalpy ID	MB-14753-DF	Prep Batch	EU14753	Extracted Mass (g)	10
Sample Name	MB-14753-DF	Prep Date	2023-02-18 13:30	Extract Vol (mL)	0.02
Matrix	solid	Analysis Date	2023-02-19 12:51	Split Factor	N/A
Sampling Date		Analyst	bahager	% Solids	100.0%
Received Date		Instrument	Gandalf	Dry Weight Equiv. (g)	10.00

	Compound	CAS	Extract Concentration pg/uL	Sample Concentration pg/g	Formatted Result pg/g	LOQ pg/g	EDL pg/g	Recovery Limits	Recovery	Flags
TCDD	2378-TCDD (S)	1746-01-6	ND	ND	ND	0.500	0.107			U
PeCDD	12378-PeCDD (S)	40321-76-4	ND	ND	ND	2.50	0.104			U
HxCDD	123478-HxCDD (S)	39227-28-6	ND	ND	ND	2.50	0.151			U
	123678-HxCDD (S)	57653-85-7	ND	ND	ND	2.50	0.131			U
	123789-HxCDD (S)	19408-74-3	ND	ND	ND	2.50	0.143			U
HpCDD	1234678-HpCDD (S)	35822-46-9	ND	ND	ND	2.50	0.131			U
OCDD	OCDD (S)	3268-87-9	0.14	0.273	0.273	5.00	0.318			L-EMPC
TCDF	2378-TCDF (S)	51207-31-9	ND	ND	ND	0.500	0.0467			U
PeCDF	12378-PeCDF (S)	57117-41-6	ND	ND	ND	2.50	0.0571			U
	23478-PeCDF (S)	57117-31-4	ND	ND	ND	2.50	0.0627			U
HxCDF	123478-HxCDF (S)	70648-26-9	ND	ND	ND	2.50	0.0476			U
	123678-HxCDF (S)	57117-44-9	ND	ND	ND	2.50	0.0505			U
	234678-HxCDF (S)	60851-34-5	ND	ND	ND	2.50	0.0496			U
	123789-HxCDF (S)	72918-21-9	ND	ND	ND	2.50	0.0627			U
HpCDF	1234678-HpCDF (S)	67562-39-4	ND	ND	ND	2.50	0.0563			U
	1234789-HpCDF (S)	55673-89-7	ND	ND	ND	2.50	0.0789			U
OCDF	OCDF (S)	39001-02-0	ND	ND	ND	5.00	0.115			U
ES	13C-2378-TCDD (ES)	76523-40-5	57.81	116			0.390	25-175%	57.8%	
	13C-12378-PeCDD (ES)	109719-79-1	55.94	112			0.438	25-181%	55.9%	
	13C-123478-HxCDD (ES)	109719-80-4	61.81	124			0.676	32-141%	61.8%	
	13C-123678-HxCDD (ES)	109719-81-5	70.96	142			0.717	28-130%	71.0%	
	13C-123789-HxCDD (ES)	109719-82-6	66.76	134			0.636	20-150%	66.8%	
	13C-1234678-HpCDD (ES)	109719-83-7	76.56	153			0.464	26-140%	76.6%	
	13C-OCDD (ES)	114423-97-1	111.41	223			0.399	17-156.5%	55.7%	
	13C-2378-TCDF (ES)	89059-46-1	53.96	108			0.377	24-152%	54.0%	
	13C-12378-PeCDF (ES)	109719-77-9	54.78	110			0.424	24-185%	54.8%	
	13C-23478-PeCDF (ES)	116843-02-8	53.11	106			0.439	21-178%	53.1%	
	13C-123478-HxCDF (ES)	114423-98-2	70.48	141			0.956	26-152%	70.5%	
	13C-123678-HxCDF (ES)	116843-03-9	65.70	131			0.795	26-123%	65.7%	
	13C-234678-HxCDF (ES)	116843-05-1	63.62	127			0.874	28-136%	63.6%	
	13C-123789-HxCDF (ES)	116843-04-0	63.02	126			0.957	29-147%	63.0%	
	13C-1234678-HpCDF (ES)	109719-84-8	69.12	138			0.825	28-143%	69.1%	
	13C-1234789-HpCDF (ES)	109719-94-0	65.06	130			0.914	26-138%	65.1%	
	13C-OCDF (ES)	109719-78-0	125.37	251			0.474	20-150%	62.7%	
CS	37Cl-2378-TCDD (CS)		50.96	102			0.0699	39-154%	127.4%	
	13C-12347-PeCDD (CS)		59.85	120			0.406	20-150%	59.9%	
	13C-12346-PeCDF (CS)		65.27	131			0.426	20-150%	65.3%	
	13C-123469-HxCDF (CS)		82.01	164			0.918	20-150%	82.0%	
	13C-1234689-HpCDF (CS)		90.61	181			0.830	20-150%	90.6%	
AS	13C-1368-TCDD (AS)		70.52	141			0.351	20-150%	70.5%	
	13C-1368-TCDF (AS)		67.74	135			0.326	20-150%	67.7%	

TCDD group total:		41903-57-5	ND	ND			0.107			
PeCDD group total:		36088-22-9	ND	ND			0.104			
HxCDD group total:		34465-46-8	ND	ND			0.142			
HpCDD group total:		37871-00-4	ND	ND			0.131			
OCDD group total:			0.14	0.273			0.318			
TCDF group total:		55722-27-5	ND	ND			0.0467			
PeCDF group total:		30402-15-4	ND	ND			0.0599			
HxCDF group total:		55684-94-1	ND	ND			0.0526			
HpCDF group total:		38998-75-3	ND	ND			0.0676			
OCDF group total:			ND	ND			0.115			

TEQ	ITEQ (ND=0; EMPC=0)			0						
	ITEQ (ND=1/2EDL;EMPC=1/2EDL)			0.132						
	ITEQ (ND=EDL EMPC=EDL)			0.264						
	ITEQ (ND=0; EMPC=EMPC)			0.000273						
	ITEQ (ND=1/2EDL; EMPC=EMPC)			0.132						
	ITEQ (ND=EDL; EMPC=EMPC)			0.264						
	WTEQ (ND=0; EMPC=0)			0						
	WTEQ (ND=1/2EDL;EMPC=1/2EDL)			0.151						
	WTEQ (ND=EDL EMPC=EDL)			0.302						
	WTEQ (ND=0; EMPC=EMPC)			0.000082						
	WTEQ (ND=1/2EDL; EMPC=EMPC)			0.151						
	WTEQ (ND=EDL; EMPC=EMPC)			0.302						

Enthalpy Analytical

Job No.: 0223-776-1 EPA Method 1613B Solid

Anchor QEA, LLC Client Project: 200217-01.01 Site: CalPortland Maintenance

Enthalpy ID	OPR-14753-DF	Prep Batch	EU14753	Extracted Mass (g)	10
Sample Name	OPR-14753-DF	Prep Date	2023-02-18 13:30	Extract Vol (mL)	0.02
Matrix	solid	Analysis Date	2023-02-19 11:08	Split Factor	N/A
Sampling Date		Analyst	bahager	% Solids	100.0%
Received Date		Instrument	Gandalf	Dry Weight Equiv. (g)	10.00

	Compound	CAS	Extract Concentration pg/uL	Sample Concentration pg/g	Formatted Result pg/g	LOQ pg/g	EDL pg/g	Recovery Limits	Recovery	Flags
TCDD	2378-TCDD (S)	1746-01-6	9.44	18.9	18.9	0.500	0.111	67-158%	94.4%	
PeCDD	12378-PeCDD (S)	40321-76-4	54.06	108	108	2.50	0.370	70-142%	108.1%	
HxCDD	123478-HxCDD (S)	39227-28-6	52.10	104	104	2.50	0.471	70-164%	104.2%	
	123678-HxCDD (S)	57653-85-7	46.96	93.9	93.9	2.50	0.407	76-134%	93.9%	
	123789-HxCDD (S)	19408-74-3	48.96	97.9	97.9	2.50	0.451	64-162%	97.9%	
HpCDD	1234678-HpCDD (S)	35822-46-9	48.96	97.9	97.9	2.50	0.414	70-140%	97.9%	
OCDD	OCDD (S)	3268-87-9	106.34	213	213	5.00	0.718	78-144%	106.3%	
TCDF	2378-TCDF (S)	51207-31-9	9.52	19.0	19.0	0.500	0.117	75-158%	95.2%	
PeCDF	12378-PeCDF (S)	57117-41-6	49.80	99.6	99.6	2.50	0.254	80-134%	99.6%	
	23478-PeCDF (S)	57117-31-4	49.04	98.1	98.1	2.50	0.271	68-160%	98.1%	
HxCDF	123478-HxCDF (S)	70648-26-9	48.61	97.2	97.2	2.50	0.379	72-134%	97.2%	
	123678-HxCDF (S)	57117-44-9	50.97	102	102	2.50	0.398	84-130%	101.9%	
	234678-HxCDF (S)	60851-34-5	50.77	102	102	2.50	0.413	70-156%	101.5%	
	123789-HxCDF (S)	72918-21-9	51.33	103	103	2.50	0.511	78-130%	102.7%	
HpCDF	1234678-HpCDF (S)	67562-39-4	50.23	100	100	2.50	0.335	82-122%	100.5%	
	1234789-HpCDF (S)	55673-89-7	52.82	106	106	2.50	0.405	78-138%	105.6%	
OCDF	OCDF (S)	39001-02-0	94.98	190	190	5.00	0.371	63-170%	95.0%	
ES	13C-2378-TCDD (ES)	76523-40-5	60.98	122			0.269	25-175%	61.0%	
	13C-12378-PeCDD (ES)	109719-79-1	58.34	117			0.309	25-181%	58.3%	
	13C-123478-HxCDD (ES)	109719-80-4	67.38	135			0.459	32-141%	67.4%	
	13C-123678-HxCDD (ES)	109719-81-5	76.88	154			0.487	28-130%	76.9%	
	13C-123789-HxCDD (ES)	109719-82-6	69.37	139			0.432	20-150%	69.4%	
	13C-1234678-HpCDD (ES)	109719-83-7	76.39	153			0.405	26-140%	76.4%	
	13C-OCDD (ES)	114423-97-1	121.53	243			0.334	17-156.5%	60.8%	
	13C-2378-TCDF (ES)	89059-46-1	55.95	112			0.336	24-152%	56.0%	
	13C-12378-PeCDF (ES)	109719-77-9	58.35	117			0.418	24-185%	58.3%	
	13C-23478-PeCDF (ES)	116843-02-8	56.68	113			0.433	21-178%	56.7%	
	13C-123478-HxCDF (ES)	114423-98-2	76.69	153			0.670	26-152%	76.7%	
	13C-123678-HxCDF (ES)	116843-03-9	69.68	139			0.557	26-123%	69.7%	
	13C-234678-HxCDF (ES)	116843-05-1	69.99	140			0.613	28-136%	70.0%	
	13C-123789-HxCDF (ES)	116843-04-0	69.08	138			0.671	29-147%	69.1%	
	13C-1234678-HpCDF (ES)	109719-84-8	77.24	154			1.31	28-143%	77.2%	
	13C-1234789-HpCDF (ES)	109719-94-0	70.90	142			1.45	26-138%	70.9%	
	13C-OCDF (ES)	109719-78-0	136.89	274			0.387	20-150%	68.4%	
CS	37Cl-2378-TCDD (CS)		51.00	102			0.0605	39-154%	127.5%	
	13C-12347-PeCDD (CS)		60.83	122			0.287	20-150%	60.8%	
	13C-12346-PeCDF (CS)		68.79	138			0.420	20-150%	68.8%	
	13C-123469-HxCDF (CS)		83.85	168			0.643	20-150%	83.8%	
	13C-1234689-HpCDF (CS)		91.73	183			1.32	20-150%	91.7%	
AS	13C-1368-TCDD (AS)		72.14	144			0.242	20-150%	72.1%	
	13C-1368-TCDF (AS)		70.38	141			0.291	20-150%	70.4%	

TCDD group total:		41903-57-5	38.92	77.8			0.111			
PeCDD group total:		36088-22-9	168.99	338			0.370			
HxCDD group total:		34465-46-8	211.73	423			0.443			
HpCDD group total:		37871-00-4	111.74	223			0.414			
OCDD group total:			106.34	213			0.718			
TCDF group total:		55722-27-5	43.67	87.3			0.117			
PeCDF group total:		30402-15-4	152.95	306			0.262			
HxCDF group total:		55684-94-1	305.68	611			0.425			
HpCDF group total:		38998-75-3	103.05	206			0.370			
OCDF group total:			94.98	190			0.371			

TEQ	ITEQ (ND=0; EMPC=0)			202						
	ITEQ (ND=1/2EDL;EMPC=1/2EDL)			202						
	ITEQ (ND=EDL EMPC=EDL)			202						
	ITEQ (ND=0; EMPC=EMPC)			202						
	ITEQ (ND=1/2EDL; EMPC=EMPC)			202						
	ITEQ (ND=EDL; EMPC=EMPC)			202						
	WTEQ (ND=0; EMPC=0)			234						
	WTEQ (ND=1/2EDL;EMPC=1/2EDL)			234						
	WTEQ (ND=EDL EMPC=EDL)			234						
	WTEQ (ND=0; EMPC=EMPC)			234						
	WTEQ (ND=1/2EDL; EMPC=EMPC)			234						
	WTEQ (ND=EDL; EMPC=EMPC)			234						

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Anchor QEA, LLC
Job#	0223-776 EPA Method 1613B
Client Project #	200217-01.01 Site: CalPortland Maintenance

Custody	Josie Morton of Enthalpy Analytical Wilmington received the samples (via FedEx) in a cooler on February 18, 2023 at -0.2°C in good condition. Prior to, during, and after analysis, the samples were stored in the laboratory with access only by authorized personnel of Enthalpy Analytical, LLC.
Analysis	The samples were analyzed by EPA Method 1613B for PCDDs/PCDFs using Agilent Technologies Model# 6890 High-Resolution GC/ Waters High-Resolution Mass-Spectrometer (HRGC/HRMS "Gandalf"). After sampling by the client, the laboratory spiked the samples with Extraction Standard (ES). Added 10-50 grams of sodium sulfate to a homogenized aliquot of each sample. Mixed well until a free-flowing solid is created. The samples were then extracted by Soxhlet with toluene. After solvent exchange with hexane, each extract was spiked with Alternate Standard (AS) and Clean Up Standard (CS). Cleanup procedures were performed on the extract. The final sample extract was transferred to an autosampler vial and spiked with 20 µL of Injection Standard (JS), prior to analysis.
Calibration	In the initial calibration, the analytes and labeled standards exhibited RSDs less than 20%. The continuing calibration (concal) and Initial Calibration Verification (ICV) met method criteria.
QC Notes	The HRMS system displayed mass resolving power of at least 10,000 during the analysis. Labeled and sampling (surrogate) standard recovery values in the Ongoing Precision Recovery (OPR) and method blank were acceptable. GC resolution parameters were met for TCDD and TCDF. The sample was extracted within the 30-day from collection holding time and analyzed within the 45-day from extraction to analysis holding time required by the method.
Reporting Notes	Solid sample results are reported on a dry weight basis. To achieve nominal 1-2g sample aliquot, a percent solid analysis was performed to determine dry weight. "As Is" results are available upon request. The TEQ was calculated and reported using I-TEF and WHO-2005 TEF, calculated by multiplying the concentration for each 2,3,7,8-substituted PCDD/F by its toxic equivalency factor (TEF). The Totals and Detection Limits have been included in the report. The TEQ is reported with and without EMPCs included. Additionally, the TEQ may be reported with

non-detects treated as having a concentration of zero, a concentration of one-half the EDL, and/or a concentration equal to the EDL.

Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical, LLC in Wilmington NC is accredited by the Louisiana Department of Environmental Quality to the 2009 TNI Standard under certificate number 05075.

General Reporting Notes – Data Qualifiers

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC - Wilmington, NC data reports, unless specifically noted otherwise.

General Data Qualifiers

- B – The analyte was found in the method blank, at a concentration that was at least 10% of the amount in the sample.
- Cxx – Two or more congeners co-elute. In EDDs, C denotes the lowest IUPAC congener in a co-elution group and additional co-eluters for the group ('xx') are shown with the number of the lowest IUPAC co-eluter.
- E – The reported concentration exceeds the calibration range (upper point of the calibration curve). For HRMS data, this condition does not imply additional measurement uncertainty. For LC-MS/MS data, these values should be considered as having measurement uncertainty higher than values within the calibration range.
- EDL – Estimated Detection Level: The EDL is unique to isotope dilution methods and reflects the conditions of analysis at the time of analysis, including the equipment used. Where the MDL is a static value, the EDL is a dynamic value.
- EMPC – Estimated Maximum Possible Concentration: EMPC is specific to Dioxin/Furan tests to indicate the determined ion-abundance ratio was outside the allowed theoretical range (usually due to being near the detection limit, although it can very rarely be caused by a co-eluting interference). The EMPC concentration is adjusted to reflect the value at the theoretical ion-abundance ratio.
- IR – The ion ratio between the primary and secondary ions was observed to be outside the method criteria. The analyte concentration may be inaccurate due to interference.
- J – The analyte has a concentration below the minimum calibration level (LOQ value) but greater than the LOD. These values should be considered as having measurement uncertainty higher than values within the calibration range
- L - Indicates that an analyte has a concentration below the Minimum Detection Limit (MDL). The reported concentration is not recommended for regulatory use as the analyte signal may have a signal-to-noise ratio less than the criteria deemed necessary to be considered a detected analyte.
- LOD – Limit of Detection: For reports conforming to the DOD ELAP QSM, this is the QSM-defined LOD. For reports conforming to TNI requirements (but not DOD ELAP QSM requirements), this value is the minimum detection limit (MDL). The LOD is adjusted for sample weight or volume.
- LOQ – Limit of Quantitation: For reports conforming to the DOD ELAP QSM, this is the QSM-defined LOQ. For reports conforming to TNI requirements (but not DOD ELAP QSM requirements), this value is the reporting limit (RL). The LOQ is adjusted for sample weight or volume.

General Reporting Notes – Data Qualifiers

- <LOD() – Analyte was not found at a concentration high enough to be reported as detected. It is reported as less than the LOD, and the LOD is given in the parentheses.
- <LOQ() – Analyte was not found at a concentration high enough to be reported as above the QSM-defined LOQ or TNI defined Reporting Limit. It is reported as less than the LOQ, and the LOQ is given in the parentheses.
- ND – Indicates a non-detect.
- NR – Indicates a value that is not reportable due to issues observed in sample preparation or analysis.
- PR – The associated congener(s) is(are) poorly resolved.
- QI – Indicates the presence of a quantitative interference.
- RL – Reporting Limit. Lowest reportable value. The level is higher than the MDL.
- SI – Denotes "Single Ion Mode" and is utilized for PCBs where the secondary ion trace has a significantly elevated noise level due to background PFK. Responses for such peaks are calculated using an EMPC approach based solely on the primary ion area(s) and may be considered estimates.
- U – The analyte was not detected.
- V / Q – The labeled standard recovery is not within method control limits.
- X – Indicates the result is from re-injection/repeat/second-column analysis.

Lab Identifiers/ Data Attributes

- AR – Indicates use of the archived portion of the sample extract.
- CU – Indicates a sample that required additional clean-up prior to HRMS injection/processing.
- D – Dilution Data. Result was obtained from the analysis of a dilution. The number that follows the "D" indicates the dilution factor.
- DE – Indicates a dilution performed with the addition of ES (Extraction Standard) solution.
- DUP – Designation for a duplicate sample.
- MS – Designation for a matrix spike.
- MSD – Designation for a matrix spike duplicate.
- R – Indicates a re-extraction of the sample.
- RJ – Indicates a reinjection of the sample extract.

- S – Indicates a sample split. The number that follows the "S" indicates the split factor.
- SAT – Indicates an analyte saturated the detector.

Sample Custody

23B0278

0223-776

Chain of Custody Record & Laboratory Analysis Request

Laboratory Name: ARI
Date: 2/13/23
Project Name: CalPortland Maintenance Dredging
Project Number: 200217-01.01
Project Manager: Josh Jenson
Phone Number: 206-903-3374
Shipment Method: Drop off

Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Test Parameters: TOC, VI, TDC, TVS	Metals	DAH/PCB/SVOC/TBT	Dioxins	Grainsize, MC	VOC	Comments/Preservation
1	CPMD-SS-01-021323	2/13/23 0932	SE	1	X	X	X	X	X	X	
2	CPMD-SS-02-021323	2/13/23 1038	SE	1	X	X	X	X	X	X	
3											
4	Fedex, cooler, on	ice, no seals,									
5	good condition										
6	394716635293	JMM 2-18-23									
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											

Notes:

Relinquished By: Jake Light — Company: Anchor QEA, LLC — 2/13/23 1230
Signature/Printed Name — Date/Time

Received By: Jacob Hall — Company: ARI LLC — 2/13/23 1230
Signature/Printed Name — Date/Time

Relinquished By: Phillip Bates — Company: AR — 2/17/23 14:27
Signature/Printed Name — Date/Time

Received By: Lexis Sullivan — Company: AQ — 2/17/23 14:27
Signature/Printed Name — Date/Time

Lexis Sullivan AQ 2/17/23 16:28

Jessie Moton 12:00 2-18-23 -0.2 TII

This Is The Last Page Of This Report.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Anchor QEA
Josh Jensen
1201 3rd Ave Ste 2600
Seattle, WA 98101

RE: CalPortland Maintenance Dredging
Work Order Number: 2302322

February 22, 2023

Attention Josh Jensen:

Fremont Analytical, Inc. received 2 sample(s) on 2/17/2023 for the analyses presented in the following report.

Herbicides by EPA Method 8151A (GC/MS)
Mercury by EPA Method 7471B
Organochlorine Pesticides by EPA Method 8081
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)
Sample Moisture (Percent Moisture)
Semivolatile Organic Compounds by EPA Method 8270
Total Metals by EPA Method 6020B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

CC:
Jennifer Marsalla
Lab Data
Lydia Greaves

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing
ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing
Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: *02/27/2023*

CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging
Work Order: 2302322

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2302322-001	CPMD-SS-01-021323	02/13/2023 12:00 AM	02/17/2023 3:06 PM
2302322-002	CPMD-SS-02-021323	02/13/2023 10:38 AM	02/17/2023 3:06 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **2302322**
Date: **2/22/2023**

CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

2/21/2023: Revision 1 includes addition of Polyaromatic Hydrocarbons by EPA Method 8270 (SIM) and Organochlorine Pesticides by EPA Method 8081.
2/22/2023: Revision 2 includes addition of Semivolatile Organic Compounds by EPA Method 8270.
2/27/2023: Revision 3 includes addition of Herbicides by EPA Method 8151.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
DUP - Sample Duplicate
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MCL - Maximum Contaminant Level
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Anchor QEA **Collection Date:** 2/13/2023
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-001 **Matrix:** Sediment
Client Sample ID: **CPMD-SS-01-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Organochlorine Pesticides by EPA Method 8081				Batch ID: 39493		Analyst: KJ
Toxaphene	ND	0.0652		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Alpha BHC	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Beta BHC	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Gamma BHC (Lindane)	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Delta BHC	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Heptachlor	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Aldrin	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Heptachlor epoxide	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
gamma-Chlordane	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Endosulfan I	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
alpha-Chlordane	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Dieldrin	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
4,4´-DDE	ND	0.00931		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Endrin	ND	0.0140		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Endosulfan II	ND	0.0140		mg/Kg-dry	1	2/21/2023 11:21:04 AM
4,4´-DDD	ND	0.0140		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Endrin aldehyde	ND	0.0149		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Endosulfan sulfate	ND	0.0140		mg/Kg-dry	1	2/21/2023 11:21:04 AM
4,4´-DDT	ND	0.0149		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Endrin ketone	ND	0.0186		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Methoxychlor	ND	0.0186		mg/Kg-dry	1	2/21/2023 11:21:04 AM
Surr: Decachlorobiphenyl	187	12.7 - 168	S	%Rec	1	2/21/2023 11:21:04 AM
Surr: Tetrachloro-m-xylene	184	66.6 - 140	S	%Rec	1	2/21/2023 11:21:04 AM

NOTES:
S - Outlying surrogate recovery(ies) observed (high bias). Sample is non-detect; result meets QC requirements.

Herbicides by EPA Method 8151A (GC/MS)				Batch ID: 39494		Analyst: CB
Dicamba	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
2,4-D	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
2,4-DP	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
2,4,5-TP (Silvex)	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
2,4,5-T	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Dinoseb	ND	47.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Dalapon	ND	189		µg/Kg-dry	1	2/24/2023 9:44:15 PM
2,4-DB	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
MCPP	ND	47.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
MCPA	ND	47.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Picloram	ND	47.4	*	µg/Kg-dry	1	2/24/2023 9:44:15 PM

Client: Anchor QEA **Collection Date:** 2/13/2023
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-001 **Matrix:** Sediment
Client Sample ID: **CPMD-SS-01-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Herbicides by EPA Method 8151A (GC/MS)				Batch ID: 39494		Analyst: CB
Bentazon	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Chloramben	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Acifluorfen	ND	47.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
3,5-Dichlorobenzoic acid	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
4-Nitrophenol	ND	28.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Dacthal (DCPA)	ND	47.4		µg/Kg-dry	1	2/24/2023 9:44:15 PM
Surr: 2,4-Dichlorophenylacetic acid	53.5	5.89 - 160		%Rec	1	2/24/2023 9:44:15 PM
NOTES:						
* - Associated LCS is below acceptance criteria. Result may be low-biased.						
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 39490		Analyst: CB
Naphthalene	ND	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
2-Methylnaphthalene	ND	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
1-Methylnaphthalene	ND	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Acenaphthylene	ND	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Acenaphthene	ND	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Fluorene	ND	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Phenanthrene	84.4	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Anthracene	41.4	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Fluoranthene	207	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Pyrene	197	38.9		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Benz(a)anthracene	112	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Chrysene	181	19.4		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Benzo(b)fluoranthene	203	24.3		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Benzo(k)fluoranthene	70.9	24.3		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Benzo(a)pyrene	133	29.2		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Indeno(1,2,3-cd)pyrene	54.6	38.9		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Dibenz(a,h)anthracene	ND	48.6		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Benzo(g,h,i)perylene	72.2	48.6		µg/Kg-dry	1	2/20/2023 6:40:52 PM
Surr: 2-Fluorobiphenyl	58.9	34.4 - 132		%Rec	1	2/20/2023 6:40:52 PM
Surr: Terphenyl-d14 (surr)	64.2	32.8 - 147		%Rec	1	2/20/2023 6:40:52 PM
Semivolatile Organic Compounds by EPA Method 8270				Batch ID: 39489		Analyst: CB
Phenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Bis(2-chloroethyl) ether	ND	48.6		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2-Chlorophenol	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
1,3-Dichlorobenzene	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM

Client: Anchor QEA
Collection Date: 2/13/2023
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-001
Matrix: Sediment
Client Sample ID: **CPMD-SS-01-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semivolatile Organic Compounds by EPA Method 8270				Batch ID: 39489		Analyst: CB
1,4-Dichlorobenzene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
1,2-Dichlorobenzene	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Benzyl alcohol	ND	146	Q	µg/Kg-dry	1	2/21/2023 5:25:19 PM
2-Methylphenol (o-cresol)	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Hexachloroethane	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
N-Nitrosodi-n-propylamine	ND	77.8		µg/Kg-dry	1	2/21/2023 5:25:19 PM
3&4-Methylphenol (m, p-cresol)	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Nitrobenzene	ND	48.6		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Isophorone	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2-Nitrophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,4-Dimethylphenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Bis(2-chloroethoxy)methane	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,4-Dichlorophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
1,2,4-Trichlorobenzene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Naphthalene	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
4-Chloroaniline	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Hexachlorobutadiene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
4-Chloro-3-methylphenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2-Methylnaphthalene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
1-Methylnaphthalene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Hexachlorocyclopentadiene	ND	97.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,4,6-Trichlorophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,4,5-Trichlorophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2-Chloronaphthalene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2-Nitroaniline	ND	48.6		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Acenaphthene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Dimethylphthalate	ND	3,400		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,6-Dinitrotoluene	ND	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Acenaphthylene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,4-Dinitrophenol	ND	292		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Dibenzofuran	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
2,4-Dinitrotoluene	ND	58.3		µg/Kg-dry	1	2/21/2023 5:25:19 PM
4-Nitrophenol	ND	194		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Fluorene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
4-Chlorophenyl phenyl ether	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Diethylphthalate	ND	729		µg/Kg-dry	1	2/21/2023 5:25:19 PM
4,6-Dinitro-2-methylphenol	ND	243		µg/Kg-dry	1	2/21/2023 5:25:19 PM
4-Bromophenyl phenyl ether	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Hexachlorobenzene	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM

Client: Anchor QEA **Collection Date:** 2/13/2023
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-001 **Matrix:** Sediment
Client Sample ID: **CPMD-SS-01-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semivolatile Organic Compounds by EPA Method 8270				Batch ID: 39489		Analyst: CB
Pentachlorophenol	ND	194		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Phenanthrene	67.8	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Anthracene	38.1	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Carbazole	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Di-n-butylphthalate	ND	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Fluoranthene	191	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Pyrene	187	146		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Butyl Benzylphthalate	ND	48.6		µg/Kg-dry	1	2/21/2023 5:25:19 PM
bis(2-Ethylhexyl)adipate	ND	194		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Benz(a)anthracene	108	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Chrysene	168	48.6		µg/Kg-dry	1	2/21/2023 5:25:19 PM
bis (2-Ethylhexyl) phthalate	134	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Di-n-octyl phthalate	ND	72.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Benzo(b)fluoranthene	195	97.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Benzo(k)fluoranthene	69.8	29.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Benzo(a)pyrene	134	38.9		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Indeno(1,2,3-cd)pyrene	ND	194		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Dibenz(a,h)anthracene	ND	97.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Benzo(g,h,i)perylene	97.6	97.2		µg/Kg-dry	1	2/21/2023 5:25:19 PM
Surr: 2,4,6-Tribromophenol	84.6	16.2 - 150		%Rec	1	2/21/2023 5:25:19 PM
Surr: 2-Fluorobiphenyl	74.3	25.3 - 139		%Rec	1	2/21/2023 5:25:19 PM
Surr: Nitrobenzene-d5	73.2	12.7 - 143		%Rec	1	2/21/2023 5:25:19 PM
Surr: Phenol-d6	84.2	21.4 - 139		%Rec	1	2/21/2023 5:25:19 PM
Surr: p-Terphenyl	74.9	37.1 - 144		%Rec	1	2/21/2023 5:25:19 PM

NOTES:
Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Mercury by EPA Method 7471B				Batch ID: 39484		Analyst: SS
Mercury	ND	0.312		mg/Kg-dry	1	2/20/2023 1:50:39 PM
Total Metals by EPA Method 6020B				Batch ID: 39480		Analyst: EH
Antimony	ND	1.08		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Arsenic	12.7	0.359		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Barium	53.6	0.719		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Beryllium	ND	1.44		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Cadmium	0.382	0.0288		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Chromium	19.7	0.359	Q	mg/Kg-dry	1	2/20/2023 4:39:00 PM

Analytical Report

Work Order: **2302322**
Date Reported: **2/22/2023**

Client: Anchor QEA
Collection Date: 2/13/2023
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-001
Matrix: Sediment
Client Sample ID: **CPMD-SS-01-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020B				Batch ID: 39480		Analyst: EH
Copper	46.8	1.08		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Lead	28.9	1.44		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Nickel	15.2	0.359		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Selenium	ND	1.44		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Silver	0.285	0.0288		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Thallium	ND	1.44		mg/Kg-dry	1	2/20/2023 4:39:00 PM
Zinc	88.5	5.03		mg/Kg-dry	1	2/20/2023 4:39:00 PM

NOTES:
Q - Associated calibration verification is above acceptance criteria. Result may be high-biased.

Sample Moisture (Percent Moisture)				Batch ID: R81952		Analyst: MP
Percent Moisture	44.8	0.500		wt%	1	2/20/2023 8:28:08 AM

Client: Anchor QEA **Collection Date:** 2/13/2023 10:38:00 AM
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-002 **Matrix:** Sediment
Client Sample ID: **CPMD-SS-02-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Organochlorine Pesticides by EPA Method 8081				Batch ID: 39493		Analyst: KJ
Toxaphene	ND	0.0687		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Alpha BHC	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Beta BHC	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Gamma BHC (Lindane)	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Delta BHC	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Heptachlor	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Aldrin	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Heptachlor epoxide	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
gamma-Chlordane	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Endosulfan I	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
alpha-Chlordane	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Dieldrin	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
4,4´-DDE	ND	0.00982		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Endrin	ND	0.0147		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Endosulfan II	ND	0.0147		mg/Kg-dry	1	2/21/2023 11:40:33 AM
4,4´-DDD	ND	0.0147		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Endrin aldehyde	ND	0.0157		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Endosulfan sulfate	ND	0.0147		mg/Kg-dry	1	2/21/2023 11:40:33 AM
4,4´-DDT	ND	0.0157		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Endrin ketone	ND	0.0196		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Methoxychlor	ND	0.0196		mg/Kg-dry	1	2/21/2023 11:40:33 AM
Surr: Decachlorobiphenyl	175	12.7 - 168	S	%Rec	1	2/21/2023 11:40:33 AM
Surr: Tetrachloro-m-xylene	176	66.6 - 140	S	%Rec	1	2/21/2023 11:40:33 AM

NOTES:
S - Outlying surrogate recovery(ies) observed (high bias). Sample is non-detect; result meets QC requirements.

Herbicides by EPA Method 8151A (GC/MS)				Batch ID: 39494		Analyst: CB
Dicamba	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
2,4-D	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
2,4-DP	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
2,4,5-TP (Silvex)	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
2,4,5-T	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Dinoseb	ND	45.9		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Dalapon	ND	183		µg/Kg-dry	1	2/24/2023 10:04:14 PM
2,4-DB	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
MCPP	ND	45.9		µg/Kg-dry	1	2/24/2023 10:04:14 PM
MCPA	ND	45.9		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Picloram	ND	45.9	*	µg/Kg-dry	1	2/24/2023 10:04:14 PM

Client: Anchor QEA **Collection Date:** 2/13/2023 10:38:00 AM
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-002 **Matrix:** Sediment
Client Sample ID: **CPMD-SS-02-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Herbicides by EPA Method 8151A (GC/MS)				Batch ID: 39494		Analyst: CB
Bentazon	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Chloramben	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Acifluorfen	ND	45.9		µg/Kg-dry	1	2/24/2023 10:04:14 PM
3,5-Dichlorobenzoic acid	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
4-Nitrophenol	ND	27.5		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Dacthal (DCPA)	ND	45.9		µg/Kg-dry	1	2/24/2023 10:04:14 PM
Surr: 2,4-Dichlorophenylacetic acid	58.0	5.89 - 160		%Rec	1	2/24/2023 10:04:14 PM
NOTES:						
* - Associated LCS is below acceptance criteria. Result may be low-biased.						
Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)				Batch ID: 39490		Analyst: CB
Naphthalene	ND	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
2-Methylnaphthalene	ND	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
1-Methylnaphthalene	ND	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Acenaphthylene	ND	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Acenaphthene	ND	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Fluorene	ND	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Phenanthrene	89.4	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Anthracene	47.4	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Fluoranthene	233	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Pyrene	228	38.9		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Benz(a)anthracene	123	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Chrysene	184	19.4		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Benzo(b)fluoranthene	222	24.3		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Benzo(k)fluoranthene	71.1	24.3		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Benzo(a)pyrene	143	29.2		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Indeno(1,2,3-cd)pyrene	57.4	38.9		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Dibenz(a,h)anthracene	ND	48.6		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Benzo(g,h,i)perylene	77.3	48.6		µg/Kg-dry	1	2/20/2023 8:04:19 PM
Surr: 2-Fluorobiphenyl	56.1	34.4 - 132		%Rec	1	2/20/2023 8:04:19 PM
Surr: Terphenyl-d14 (surr)	59.5	32.8 - 147		%Rec	1	2/20/2023 8:04:19 PM
Semivolatile Organic Compounds by EPA Method 8270				Batch ID: 39489		Analyst: CB
Phenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Bis(2-chloroethyl) ether	ND	48.6		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2-Chlorophenol	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
1,3-Dichlorobenzene	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM

Client: Anchor QEA
Collection Date: 2/13/2023 10:38:00 AM
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-002
Matrix: Sediment
Client Sample ID: **CPMD-SS-02-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semivolatile Organic Compounds by EPA Method 8270				Batch ID: 39489		Analyst: CB
1,4-Dichlorobenzene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
1,2-Dichlorobenzene	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Benzyl alcohol	ND	146	Q	µg/Kg-dry	1	2/21/2023 6:55:35 PM
2-Methylphenol (o-cresol)	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Hexachloroethane	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
N-Nitrosodi-n-propylamine	ND	77.8		µg/Kg-dry	1	2/21/2023 6:55:35 PM
3&4-Methylphenol (m, p-cresol)	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Nitrobenzene	ND	48.6		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Isophorone	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2-Nitrophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,4-Dimethylphenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Bis(2-chloroethoxy)methane	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,4-Dichlorophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
1,2,4-Trichlorobenzene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Naphthalene	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
4-Chloroaniline	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Hexachlorobutadiene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
4-Chloro-3-methylphenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2-Methylnaphthalene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
1-Methylnaphthalene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Hexachlorocyclopentadiene	ND	97.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,4,6-Trichlorophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,4,5-Trichlorophenol	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2-Chloronaphthalene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2-Nitroaniline	ND	48.6		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Acenaphthene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Dimethylphthalate	ND	3,400		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,6-Dinitrotoluene	ND	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Acenaphthylene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,4-Dinitrophenol	ND	292		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Dibenzofuran	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
2,4-Dinitrotoluene	ND	58.3		µg/Kg-dry	1	2/21/2023 6:55:35 PM
4-Nitrophenol	ND	194		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Fluorene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
4-Chlorophenyl phenyl ether	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Diethylphthalate	ND	729		µg/Kg-dry	1	2/21/2023 6:55:35 PM
4,6-Dinitro-2-methylphenol	ND	243		µg/Kg-dry	1	2/21/2023 6:55:35 PM
4-Bromophenyl phenyl ether	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Hexachlorobenzene	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM

Client: Anchor QEA **Collection Date:** 2/13/2023 10:38:00 AM
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-002 **Matrix:** Sediment
Client Sample ID: **CPMD-SS-02-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semivolatile Organic Compounds by EPA Method 8270				Batch ID: 39489		Analyst: CB
Pentachlorophenol	ND	194		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Phenanthrene	69.4	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Anthracene	40.7	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Carbazole	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Di-n-butylphthalate	ND	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Fluoranthene	204	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Pyrene	195	146		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Butyl Benzylphthalate	ND	48.6		µg/Kg-dry	1	2/21/2023 6:55:35 PM
bis(2-Ethylhexyl)adipate	ND	194		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Benz(a)anthracene	117	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Chrysene	152	48.6		µg/Kg-dry	1	2/21/2023 6:55:35 PM
bis (2-Ethylhexyl) phthalate	158	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Di-n-octyl phthalate	ND	72.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Benzo(b)fluoranthene	185	97.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Benzo(k)fluoranthene	68.9	29.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Benzo(a)pyrene	133	38.9		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Indeno(1,2,3-cd)pyrene	ND	194		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Dibenz(a,h)anthracene	ND	97.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Benzo(g,h,i)perylene	ND	97.2		µg/Kg-dry	1	2/21/2023 6:55:35 PM
Surr: 2,4,6-Tribromophenol	76.6	16.2 - 150		%Rec	1	2/21/2023 6:55:35 PM
Surr: 2-Fluorobiphenyl	64.5	25.3 - 139		%Rec	1	2/21/2023 6:55:35 PM
Surr: Nitrobenzene-d5	62.4	12.7 - 143		%Rec	1	2/21/2023 6:55:35 PM
Surr: Phenol-d6	71.9	21.4 - 139		%Rec	1	2/21/2023 6:55:35 PM
Surr: p-Terphenyl	66.3	37.1 - 144		%Rec	1	2/21/2023 6:55:35 PM

NOTES:
Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Mercury by EPA Method 7471B				Batch ID: 39484		Analyst: SS
Mercury	ND	0.359		mg/Kg-dry	1	2/20/2023 1:52:20 PM
Total Metals by EPA Method 6020B				Batch ID: 39480		Analyst: EH
Antimony	ND	1.11		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Arsenic	14.3	0.369		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Barium	61.2	0.738		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Beryllium	ND	1.48		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Cadmium	0.399	0.0295		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Chromium	21.2	0.369	Q	mg/Kg-dry	1	2/20/2023 4:41:00 PM

Analytical Report

Work Order: **2302322**
Date Reported: **2/22/2023**

Client: Anchor QEA
Collection Date: 2/13/2023 10:38:00 AM
Project: CalPortland Maintenance Dredging
Lab ID: 2302322-002
Matrix: Sediment
Client Sample ID: **CPMD-SS-02-021323**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Metals by EPA Method 6020B				Batch ID: 39480		Analyst: EH
Copper	52.7	1.11		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Lead	33.7	1.48		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Nickel	15.8	0.369		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Selenium	ND	1.48		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Silver	0.288	0.0295		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Thallium	ND	1.48		mg/Kg-dry	1	2/20/2023 4:41:00 PM
Zinc	99.3	5.16		mg/Kg-dry	1	2/20/2023 4:41:00 PM

NOTES:
Q - Associated calibration verification is above acceptance criteria. Result may be high-biased.

Sample Moisture (Percent Moisture)				Batch ID: R81952		Analyst: MP
Percent Moisture	49.4	0.500		wt%	1	2/20/2023 8:28:08 AM

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-39480** SampType: **MBLK** Units: **mg/Kg** Prep Date: **2/20/2023** RunNo: **81982**
Client ID: **MBLKS** Batch ID: **39480** Analysis Date: **2/20/2023** SeqNo: **1700690**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.750									
Arsenic	ND	0.250									
Barium	ND	0.500									
Beryllium	ND	1.00									
Cadmium	ND	0.0200									
Chromium	ND	0.250									
Copper	ND	0.750									
Lead	ND	1.00									
Nickel	ND	0.250									
Selenium	ND	1.00									
Silver	ND	0.0200									
Thallium	ND	1.00									
Zinc	ND	3.50									

Sample ID: **LCS-39480** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/20/2023** RunNo: **81982**
Client ID: **LCSS** Batch ID: **39480** Analysis Date: **2/20/2023** SeqNo: **1700691**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	2.06	0.586	1.953	0	105	80	120				
Arsenic	40.8	0.195	39.06	0	104	80	120				
Barium	40.2	0.391	39.06	0	103	80	120				
Beryllium	2.09	0.781	1.953	0	107	80	120				
Cadmium	2.02	0.0156	1.953	0	103	80	120				
Chromium	44.1	0.195	39.06	0	113	80	120				
Copper	44.3	0.586	39.06	0	113	80	120				
Lead	21.3	0.781	19.53	0	109	80	120				
Nickel	42.6	0.195	39.06	0	109	80	120				
Selenium	3.94	0.781	3.906	0	101	80	120				
Silver	2.11	0.0156	1.953	0	108	80	120				
Thallium	1.01	0.781	0.9766	0	104	80	120				
Zinc	39.5	2.73	39.06	0	101	80	120				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **LCS-39480** SampType: **LCS** Units: **mg/Kg** Prep Date: **2/20/2023** RunNo: **81982**
Client ID: **LCSS** Batch ID: **39480** Analysis Date: **2/20/2023** SeqNo: **1700691**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **2302290-001AMS** SampType: **MS** Units: **mg/Kg** Prep Date: **2/20/2023** RunNo: **81982**
Client ID: **BATCH** Batch ID: **39480** Analysis Date: **2/20/2023** SeqNo: **1700696**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.65	0.586	1.953	0	84.3	75	125				
Arsenic	33.1	0.195	39.06	0	84.8	75	125				
Barium	33.2	0.391	39.06	0.3693	84.0	75	125				
Beryllium	1.76	0.781	1.953	0	90.2	75	125				
Cadmium	1.67	0.0156	1.953	0	85.6	75	125				
Chromium	35.9	0.195	39.06	0.1115	91.6	75	125				
Copper	37.4	0.586	39.06	0.2078	95.2	75	125				
Lead	17.1	0.781	19.53	0.02963	87.5	75	125				
Nickel	35.8	0.195	39.06	0.1222	91.2	75	125				
Selenium	3.18	0.781	3.906	0	81.4	75	125				
Silver	1.73	0.0156	1.953	0.008889	88.1	75	125				
Thallium	0.822	0.781	0.9766	0	84.2	75	125				
Zinc	32.6	2.73	39.06	0	83.6	75	125				

Sample ID: **2302290-001AMSD** SampType: **MSD** Units: **mg/Kg** Prep Date: **2/20/2023** RunNo: **81982**
Client ID: **BATCH** Batch ID: **39480** Analysis Date: **2/20/2023** SeqNo: **1700697**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	1.70	0.564	1.880	0	90.7	75	125	1.647	3.42	20	
Arsenic	34.4	0.188	37.59	0	91.6	75	125	33.14	3.78	20	
Barium	34.9	0.376	37.59	0.3693	91.9	75	125	33.20	5.06	20	
Beryllium	1.83	0.752	1.880	0	97.3	75	125	1.761	3.77	20	
Cadmium	1.75	0.0150	1.880	0	93.3	75	125	1.671	4.78	20	
Chromium	35.9	0.188	37.59	0.1115	95.2	75	125	35.91	0.0599	20	
Copper	37.6	0.564	37.59	0.2078	99.4	75	125	37.38	0.504	20	
Lead	18.5	0.752	18.80	0.02963	98.1	75	125	17.13	7.50	20	

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **2302290-001AMSD** SampType: **MSD** Units: **mg/Kg** Prep Date: **2/20/2023** RunNo: **81982**
Client ID: **BATCH** Batch ID: **39480** Analysis Date: **2/20/2023** SeqNo: **1700697**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	36.7	0.188	37.59	0.1222	97.4	75	125	35.76	2.67	20	
Selenium	3.38	0.752	3.759	0	90.0	75	125	3.180	6.24	20	
Silver	1.81	0.0150	1.880	0.008889	95.7	75	125	1.730	4.40	20	
Thallium	0.880	0.752	0.9398	0	93.6	75	125	0.8223	6.75	20	
Zinc	33.9	2.63	37.59	0	90.2	75	125	32.64	3.76	20	

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Mercury by EPA Method 7471B

Sample ID: **MB-39484**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **2/20/2023**	RunNo: **81968**
Client ID: **MBLKS**	Batch ID: **39484**		Analysis Date: **2/20/2023**	SeqNo: **1700449**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200									

Sample ID: **LCS-39484**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **2/20/2023**	RunNo: **81968**
Client ID: **LCSS**	Batch ID: **39484**		Analysis Date: **2/20/2023**	SeqNo: **1700450**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.246	0.200	0.2500	0	98.4	80	120				

Sample ID: **2302318-002ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **2/20/2023**	RunNo: **81968**
Client ID: **BATCH**	Batch ID: **39484**		Analysis Date: **2/20/2023**	SeqNo: **1700453**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.200						0		20	

Sample ID: **2302318-002AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **2/20/2023**	RunNo: **81968**
Client ID: **BATCH**	Batch ID: **39484**		Analysis Date: **2/20/2023**	SeqNo: **1700454**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.289	0.189	0.2363	0.04322	104	70	130				

Sample ID: **2302318-002AMSD**	SampType: **MSD**	Units: **mg/Kg-dry**	Prep Date: **2/20/2023**	RunNo: **81968**
Client ID: **BATCH**	Batch ID: **39484**		Analysis Date: **2/20/2023**	SeqNo: **1700455**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.290	0.200	0.2505	0.04322	98.3	70	130	0.2892	0.111	20	

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Herbicides by EPA Method 8151A (GC/MS)

Sample ID: **MB-39494** SampType: **MBLK** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82100**
Client ID: **MBLKS** Batch ID: **39494** Analysis Date: **2/24/2023** SeqNo: **1704192**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	ND	30.0									
2,4-D	ND	30.0									
2,4-DP	ND	30.0									
2,4,5-TP (Silvex)	ND	30.0									
2,4,5-T	ND	30.0									
Dinoseb	ND	50.0									
Dalapon	ND	200									
2,4-DB	ND	30.0									
MCPP	ND	50.0									
MCPA	ND	50.0									
Picloram	ND	50.0									
Bentazon	ND	30.0									
Chloramben	ND	30.0									
Acifluorfen	ND	50.0									
3,5-Dichlorobenzoic acid	ND	30.0									
4-Nitrophenol	ND	30.0									
Dacthal (DCPA)	ND	50.0									
Surr: 2,4-Dichlorophenylacetic acid	874		1,000		87.4	5.89	160				

Sample ID: **LCS-39494** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82100**
Client ID: **LCSS** Batch ID: **39494** Analysis Date: **2/24/2023** SeqNo: **1704193**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	124	30.0	200.0	0	62.0	52	157				
2,4-D	125	30.0	200.0	0	62.6	54.7	176				
2,4-DP	124	30.0	200.0	0	61.8	55.1	160				
2,4,5-TP (Silvex)	130	30.0	200.0	0	65.0	56.8	169				
2,4,5-T	126	30.0	200.0	0	63.1	54	175				
Dinoseb	106	50.0	200.0	0	52.9	5	110				
Dalapon	735	200	1,000	0	73.5	39.5	170				
2,4-DB	118	30.0	200.0	0	59.2	44.1	184				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Herbicides by EPA Method 8151A (GC/MS)

Sample ID: **LCS-39494** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82100**
Client ID: **LCSS** Batch ID: **39494** Analysis Date: **2/24/2023** SeqNo: **1704193**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MCPP	621	50.0	1,000	0	62.1	46.2	159				
MCPA	623	50.0	1,000	0	62.3	42.5	169				
Picloram	128	50.0	200.0	0	64.2	70.5	196				S
Bentazon	128	30.0	200.0	0	63.9	60	165				
Chloramben	100	30.0	200.0	0	50.2	8.12	127				
Acifluorfen	105	50.0	200.0	0	52.6	5	127				
3,5-Dichlorobenzoic acid	121	30.0	200.0	0	60.3	47.2	152				
4-Nitrophenol	116	30.0	200.0	0	58.2	47.9	155				
Dacthal (DCPA)	142	50.0	200.0	0	71.2	64.7	178				
Surr: 2,4-Dichlorophenylacetic acid	776		1,000		77.6	5.89	160				

NOTES:
S - Outlying spike recovery observed (low bias). Samples will be qualified with a *.

Sample ID: **2302322-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82100**
Client ID: **CPMD-SS-02-021323** Batch ID: **39494** Analysis Date: **2/24/2023** SeqNo: **1704196**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	90.4	29.2	194.7	0	46.4	5	127				
2,4-D	85.8	29.2	194.7	0	44.1	5.62	147				
2,4-DP	78.4	29.2	194.7	0	40.3	8.5	138				
2,4,5-TP (Silvex)	101	29.2	194.7	0	51.8	11.6	141				
2,4,5-T	94.4	29.2	194.7	0	48.5	7.25	138				
Dinoseb	54.3	48.7	194.7	0	27.9	11.5	123				
Dalapon	502	195	973.5	0	51.6	5	139				
2,4-DB	37.8	29.2	194.7	0	19.4	28.3	146				S
MCPP	342	48.7	973.5	0	35.1	16.7	128				
MCPA	399	48.7	973.5	0	40.9	16.1	126				
Picloram	61.3	48.7	194.7	0	31.5	5	148				
Bentazon	96.8	29.2	194.7	0	49.7	26.1	123				
Chloramben	29.6	29.2	194.7	0	15.2	5	110				
Acifluorfen	82.8	48.7	194.7	0	42.5	3.83	137				
3,5-Dichlorobenzoic acid	61.1	29.2	194.7	0	31.4	9.63	114				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Herbicides by EPA Method 8151A (GC/MS)

Sample ID: **2302322-002AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82100**
Client ID: **CPMD-SS-02-021323** Batch ID: **39494** Analysis Date: **2/24/2023** SeqNo: **1704196**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Nitrophenol	ND	29.2	194.7	0	0	21.3	124				S
Dacthal (DCPA)	107	48.7	194.7	0	55.0	5	139				
Surr: 2,4-Dichlorophenylacetic acid	124		973.5		12.8	5.89	160				

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2302322-002AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82100**
Client ID: **CPMD-SS-02-021323** Batch ID: **39494** Analysis Date: **2/24/2023** SeqNo: **1704197**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dicamba	77.0	28.9	192.4	0	40.0	5	127	76.99	0	30	
2,4-D	73.3	28.9	192.4	0	38.1	5.62	147	73.34	0	30	
2,4-DP	68.5	28.9	192.4	0	35.6	8.5	138	68.47	0	30	
2,4,5-TP (Silvex)	87.9	28.9	192.4	0	45.7	11.6	141	87.92	0	30	
2,4,5-T	82.5	28.9	192.4	0	42.9	7.25	138	82.48	0	30	
Dinoseb	51.5	48.1	192.4	0	26.8	11.5	123	51.49	0	30	
Dalapon	419	192	962.1	0	43.6	5	139	419.4	0	30	
2,4-DB	32.5	28.9	192.4	0	16.9	28.3	146	32.55	0	30	S
MCPP	301	48.1	962.1	0	31.3	16.7	128	301.0	0	30	
MCPA	340	48.1	962.1	0	35.4	16.1	126	340.4	0	30	
Picloram	53.1	48.1	192.4	0	27.6	5	148	53.12	0	30	
Bentazon	83.7	28.9	192.4	0	43.5	26.1	123	83.66	0	30	
Chloramben	35.7	28.9	192.4	0	18.6	5	110	35.71	0	30	
Acifluorfen	67.6	48.1	192.4	0	35.1	3.83	137	67.55	0	30	
3,5-Dichlorobenzoic acid	52.4	28.9	192.4	0	27.2	9.63	114	52.41	0	30	
4-Nitrophenol	ND	28.9	192.4	0	0	21.3	124	0		30	S
Dacthal (DCPA)	91.9	48.1	192.4	0	47.7	5	139	91.85	0	30	
Surr: 2,4-Dichlorophenylacetic acid	122		962.1		12.6	5.89	160		0		

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **MB-39490**	SampType: **MBLK**	Units: **µg/Kg**	Prep Date: **2/20/2023**	RunNo: **81984**
Client ID: **MBLKS**	Batch ID: **39490**		Analysis Date: **2/20/2023**	SeqNo: **1700813**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	20.0									
2-Methylnaphthalene	ND	20.0									
1-Methylnaphthalene	ND	20.0									
Acenaphthene	ND	20.0									
Acenaphthylene	ND	20.0									
Phenanthrene	ND	20.0									
Fluorene	ND	20.0									
Anthracene	ND	20.0									
Fluoranthene	ND	20.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	20.0									
Chrysene	ND	20.0									
Benzo(b)fluoranthene	ND	25.0									
Benzo(k)fluoranthene	ND	25.0									
Benzo(a)pyrene	ND	30.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	50.0									
Benzo(g,h,i)perylene	ND	50.0									
Surr: 2,4,6-Tribromophenol	1,530		2,000		76.4	54.6	144				
Surr: 2-Fluorobiphenyl	860		1,000		86.0	34.4	132				
Surr: Terphenyl-d14 (surr)	914		1,000		91.4	32.8	147				

Sample ID: **LCS-39490**	SampType: **LCS**	Units: **µg/Kg**	Prep Date: **2/20/2023**	RunNo: **81984**
Client ID: **LCSS**	Batch ID: **39490**		Analysis Date: **2/20/2023**	SeqNo: **1700814**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2,070	20.0	2,000	0	103	64.3	115				
2-Methylnaphthalene	2,120	20.0	2,000	0	106	58.9	122				
1-Methylnaphthalene	2,110	20.0	2,000	0	106	57.4	122				
Acenaphthene	2,020	20.0	2,000	0	101	61.1	119				
Acenaphthylene	2,100	20.0	2,000	0	105	52.9	120				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **LCS-39490** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **81984**
Client ID: **LCSS** Batch ID: **39490** Analysis Date: **2/20/2023** SeqNo: **1700814**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenanthrene	2,000	20.0	2,000	0	100	60	118				
Fluorene	2,070	20.0	2,000	0	103	63.6	120				
Anthracene	1,910	20.0	2,000	0	95.5	59.5	119				
Fluoranthene	1,910	20.0	2,000	0	95.6	62.3	120				
Pyrene	1,910	40.0	2,000	0	95.7	61.1	120				
Benz(a)anthracene	2,000	20.0	2,000	0	100	61.5	123				
Chrysene	1,920	20.0	2,000	0	95.9	58.6	120				
Benzo(b)fluoranthene	1,930	25.0	2,000	0	96.6	62.1	124				
Benzo(k)fluoranthene	2,010	25.0	2,000	0	101	60.3	116				
Benzo(a)pyrene	2,020	30.0	2,000	0	101	51.6	115				
Indeno(1,2,3-cd)pyrene	1,960	40.0	2,000	0	97.8	53.8	127				
Dibenz(a,h)anthracene	1,970	50.0	2,000	0	98.7	53.3	127				
Benzo(g,h,i)perylene	1,980	50.0	2,000	0	99.1	48.6	122				
Surr: 2,4,6-Tribromophenol	1,630		2,000		81.3	54.6	144				
Surr: 2-Fluorobiphenyl	779		1,000		77.9	34.4	132				
Surr: Terphenyl-d14 (surr)	804		1,000		80.4	32.8	147				

Sample ID: **2302322-001AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81984**
Client ID: **CPMD-SS-01-021323** Batch ID: **39490** Analysis Date: **2/20/2023** SeqNo: **1700816**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,590	19.5	1,951	12.63	80.9	55.7	105				
2-Methylnaphthalene	1,640	19.5	1,951	8.631	83.5	56.6	103				
1-Methylnaphthalene	1,620	19.5	1,951	6.194	82.9	56.1	101				
Acenaphthene	1,600	19.5	1,951	10.64	81.2	55.9	107				
Acenaphthylene	1,630	19.5	1,951	9.759	82.9	53.8	100				
Phenanthrene	1,640	19.5	1,951	84.38	79.6	49.1	109				
Fluorene	1,670	19.5	1,951	16.15	84.6	55.7	107				
Anthracene	1,560	19.5	1,951	41.36	78.1	52.4	107				
Fluoranthene	1,700	19.5	1,951	207.4	76.7	53.1	110				
Pyrene	1,690	39.0	1,951	197.3	76.5	52.5	109				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2302322-001AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81984**
Client ID: **CPMD-SS-01-021323** Batch ID: **39490** Analysis Date: **2/20/2023** SeqNo: **1700816**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	1,650	19.5	1,951	112.2	78.7	53.4	112				
Chrysene	1,690	19.5	1,951	181.3	77.5	52	105				
Benzo(b)fluoranthene	1,770	24.4	1,951	203.4	80.3	51.3	119				
Benzo(k)fluoranthene	1,710	24.4	1,951	70.93	84.0	50.3	108				
Benzo(a)pyrene	1,810	29.3	1,951	132.7	85.8	48.5	106				
Indeno(1,2,3-cd)pyrene	1,570	39.0	1,951	54.60	77.9	42.1	113				
Dibenz(a,h)anthracene	1,550	48.8	1,951	0	79.6	40.4	114				
Benzo(g,h,i)perylene	1,590	48.8	1,951	72.21	77.8	34.7	105				
Surr: 2,4,6-Tribromophenol	1,360		1,951		69.6	54.6	144				
Surr: 2-Fluorobiphenyl	594		975.4		60.9	34.4	132				
Surr: Terphenyl-d14 (surr)	639		975.4		65.5	32.8	147				

Sample ID: **2302322-001AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81984**
Client ID: **CPMD-SS-01-021323** Batch ID: **39490** Analysis Date: **2/20/2023** SeqNo: **1700817**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,530	19.5	1,952	12.63	77.5	55.7	105	1,591	4.24	30	
2-Methylnaphthalene	1,580	19.5	1,952	8.631	80.5	56.6	103	1,638	3.69	30	
1-Methylnaphthalene	1,560	19.5	1,952	6.194	79.7	56.1	101	1,623	3.83	30	
Acenaphthene	1,520	19.5	1,952	10.64	77.5	55.9	107	1,595	4.60	30	
Acenaphthylene	1,560	19.5	1,952	9.759	79.5	53.8	100	1,627	4.08	30	
Phenanthrene	1,560	19.5	1,952	84.38	75.8	49.1	109	1,638	4.65	30	
Fluorene	1,590	19.5	1,952	16.15	80.9	55.7	107	1,667	4.44	30	
Anthracene	1,480	19.5	1,952	41.36	73.7	52.4	107	1,564	5.53	30	
Fluoranthene	1,620	19.5	1,952	207.4	72.6	53.1	110	1,704	4.84	30	
Pyrene	1,610	39.0	1,952	197.3	72.4	52.5	109	1,690	4.79	30	
Benz(a)anthracene	1,570	19.5	1,952	112.2	74.9	53.4	112	1,648	4.63	30	
Chrysene	1,590	19.5	1,952	181.3	72.0	52	105	1,693	6.46	30	
Benzo(b)fluoranthene	1,720	24.4	1,952	203.4	77.6	51.3	119	1,770	2.97	30	
Benzo(k)fluoranthene	1,560	24.4	1,952	70.93	76.1	50.3	108	1,710	9.40	30	
Benzo(a)pyrene	1,670	29.3	1,952	132.7	78.8	48.5	106	1,806	7.85	30	

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: **2302322-001AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81984**
Client ID: **CPMD-SS-01-021323** Batch ID: **39490** Analysis Date: **2/20/2023** SeqNo: **1700817**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1,440	39.0	1,952	54.60	70.9	42.1	113	1,573	8.96	30	
Dibenz(a,h)anthracene	1,420	48.8	1,952	0	73.0	40.4	114	1,553	8.66	30	
Benzo(g,h,i)perylene	1,420	48.8	1,952	72.21	69.3	34.7	105	1,590	11.0	30	
Surr: 2,4,6-Tribromophenol	1,280		1,952		65.8	54.6	144		0		
Surr: 2-Fluorobiphenyl	547		975.9		56.1	34.4	132		0		
Surr: Terphenyl-d14 (surr)	590		975.9		60.5	32.8	147		0		

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID: **MB-39493**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **2/20/2023**		RunNo: **81990**			
Client ID: **MBLKS**	Batch ID: **39493**					Analysis Date: **2/21/2023**		SeqNo: **1700898**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.0700									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4´-DDE	ND	0.0100									
Endrin	ND	0.0150									
Endosulfan II	ND	0.0150									
4,4´-DDD	ND	0.0150									
Endrin aldehyde	ND	0.0160									
Endosulfan sulfate	ND	0.0150									
4,4´-DDT	ND	0.0160									
Endrin ketone	ND	0.0200									
Methoxychlor	ND	0.0200									
Surr: Decachlorobiphenyl	0.293		0.2000		147	12.7	168				
Surr: Tetrachloro-m-xylene	0.265		0.2000		132	66.6	140				

Sample ID: **LCS1-39493**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **2/20/2023**		RunNo: **81990**			
Client ID: **LCSS**	Batch ID: **39493**					Analysis Date: **2/21/2023**		SeqNo: **1700899**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.231	0.0100	0.2000	0	116	69	143				
Beta BHC	0.223	0.0100	0.2000	0	111	67.4	133				
Gamma BHC (Lindane)	0.235	0.0100	0.2000	0	117	66.8	135				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID: **LCS1-39493**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **2/20/2023**	RunNo: **81990**
Client ID: **LCSS**	Batch ID: **39493**		Analysis Date: **2/21/2023**	SeqNo: **1700899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Delta BHC	0.239	0.0100	0.2000	0	120	67.9	133				
Heptachlor	0.241	0.0100	0.2000	0	121	73.5	149				
Aldrin	0.233	0.0100	0.2000	0	117	68.7	140				
Heptachlor epoxide	0.237	0.0100	0.2000	0	119	69.9	139				
gamma-Chlordane	0.235	0.0100	0.2000	0	117	68.1	136				
Endosulfan I	0.230	0.0100	0.2000	0	115	70.2	137				
alpha-Chlordane	0.234	0.0100	0.2000	0	117	66.4	135				
Dieldrin	0.234	0.0100	0.2000	0	117	65.1	137				
4,4´-DDE	0.244	0.0100	0.2000	0	122	62.7	131				
Endrin	0.263	0.0150	0.2000	0	132	68.1	142				
Endosulfan II	0.241	0.0150	0.2000	0	120	63.8	135				
4,4´-DDD	0.255	0.0150	0.2000	0	127	59.3	139				
Endrin aldehyde	0.237	0.0160	0.2000	0	118	62.9	134				
Endosulfan sulfate	0.234	0.0150	0.2000	0	117	62.5	133				
4,4´-DDT	0.258	0.0160	0.2000	0	129	67.4	135				
Endrin ketone	0.245	0.0200	0.2000	0	123	61	132				
Methoxychlor	0.246	0.0200	0.2000	0	123	65.9	135				
Surr: Decachlorobiphenyl	0.309		0.2000		155	12.7	168				
Surr: Tetrachloro-m-xylene	0.264		0.2000		132	66.6	140				

Sample ID: **LCS2-39493**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **2/20/2023**	RunNo: **81990**
Client ID: **LCSS**	Batch ID: **39493**		Analysis Date: **2/21/2023**	SeqNo: **1700900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	1.42	0.0700	1.000	0	142	48.6	147				
Surr: Decachlorobiphenyl	0.301		0.2000		150	12.7	168				
Surr: Tetrachloro-m-xylene	0.252		0.2000		126	66.6	140				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID: **2302322-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81990**
Client ID: **CPMD-SS-02-021323** Batch ID: **39493** Analysis Date: **2/21/2023** SeqNo: **1700903**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.290	0.00978	0.1956	0	148	73.2	151				
Beta BHC	0.273	0.00978	0.1956	0	140	65.1	144				
Gamma BHC (Lindane)	0.289	0.00978	0.1956	0	148	67.5	144				S
Delta BHC	0.311	0.00978	0.1956	0	159	67.7	143				S
Heptachlor	0.302	0.00978	0.1956	0	155	75.3	159				
Aldrin	0.294	0.00978	0.1956	0	150	68.5	149				S
Heptachlor epoxide	0.295	0.00978	0.1956	0	151	70.6	147				S
gamma-Chlordane	0.283	0.00978	0.1956	0	145	54.2	149				
Endosulfan I	0.295	0.00978	0.1956	0	151	65	147				S
alpha-Chlordane	0.290	0.00978	0.1956	0	148	61.9	144				S
Dieldrin	0.291	0.00978	0.1956	0	149	61.2	146				S
4,4´-DDE	0.296	0.00978	0.1956	0	152	59.4	143				S
Endrin	0.315	0.0147	0.1956	0	161	71.1	147				S
Endosulfan II	0.290	0.0147	0.1956	0	148	65.3	138				S
4,4´-DDD	0.312	0.0147	0.1956	0	159	59	146				S
Endrin aldehyde	0.175	0.0156	0.1956	0	89.3	49.9	129				
Endosulfan sulfate	0.279	0.0147	0.1956	0	142	53.3	142				S
4,4´-DDT	0.302	0.0156	0.1956	0	155	57.3	154				S
Endrin ketone	0.288	0.0196	0.1956	0	147	61.7	133				S
Methoxychlor	0.289	0.0196	0.1956	0	148	57.5	145				S
Surr: Decachlorobiphenyl	0.327		0.1956		167	12.7	168				
Surr: Tetrachloro-m-xylene	0.314		0.1956		161	66.6	140				S

NOTES:
S - Outlying spike and surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2302322-002AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81990**
Client ID: **CPMD-SS-02-021323** Batch ID: **39493** Analysis Date: **2/21/2023** SeqNo: **1700904**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.285	0.00979	0.1958	0	146	73.2	151	0.2903	1.87	30	
Beta BHC	0.274	0.00979	0.1958	0	140	65.1	144	0.2733	0.218	30	
Gamma BHC (Lindane)	0.286	0.00979	0.1958	0	146	67.5	144	0.2888	0.971	30	S

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Organochlorine Pesticides by EPA Method 8081

Sample ID: **2302322-002AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **2/20/2023** RunNo: **81990**
Client ID: **CPMD-SS-02-021323** Batch ID: **39493** Analysis Date: **2/21/2023** SeqNo: **1700904**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Delta BHC	0.304	0.00979	0.1958	0	155	67.7	143	0.3110	2.17	30	S
Heptachlor	0.294	0.00979	0.1958	0	150	75.3	159	0.3023	2.83	30	
Aldrin	0.286	0.00979	0.1958	0	146	68.5	149	0.2936	2.57	30	
Heptachlor epoxide	0.289	0.00979	0.1958	0	148	70.6	147	0.2950	1.97	30	S
gamma-Chlordane	0.279	0.00979	0.1958	0	142	54.2	149	0.2832	1.58	30	
Endosulfan I	0.288	0.00979	0.1958	0	147	65	147	0.2948	2.22	30	S
alpha-Chlordane	0.284	0.00979	0.1958	0	145	61.9	144	0.2895	1.81	30	S
Dieldrin	0.285	0.00979	0.1958	0	145	61.2	146	0.2909	2.19	30	
4,4´-DDE	0.293	0.00979	0.1958	0	150	59.4	143	0.2963	1.10	30	S
Endrin	0.307	0.0147	0.1958	0	157	71.1	147	0.3145	2.49	30	S
Endosulfan II	0.287	0.0147	0.1958	0	147	65.3	138	0.2904	1.14	30	S
4,4´-DDD	0.310	0.0147	0.1958	0	158	59	146	0.3117	0.528	30	S
Endrin aldehyde	0.202	0.0157	0.1958	0	103	49.9	129	0.1747	14.7	30	
Endosulfan sulfate	0.273	0.0147	0.1958	0	140	53.3	142	0.2786	1.97	30	
4,4´-DDT	0.297	0.0157	0.1958	0	152	57.3	154	0.3022	1.64	30	
Endrin ketone	0.280	0.0196	0.1958	0	143	61.7	133	0.2875	2.73	30	S
Methoxychlor	0.281	0.0196	0.1958	0	144	57.5	145	0.2891	2.78	30	
Surr: Decachlorobiphenyl	0.323		0.1958		165	12.7	168		0		
Surr: Tetrachloro-m-xylene	0.322		0.1958		165	66.6	140		0		S

NOTES:
S - Outlying spike and surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **MB-39489** SampType: **MBLK** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **MBLKS** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701600**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	30.0									
Bis(2-chloroethyl) ether	ND	50.0									
2-Chlorophenol	ND	40.0									
1,3-Dichlorobenzene	ND	40.0									
1,4-Dichlorobenzene	ND	30.0									
1,2-Dichlorobenzene	ND	40.0									
Benzyl alcohol	ND	150									Q
2-Methylphenol (o-cresol)	ND	40.0									
Hexachloroethane	ND	40.0									
N-Nitrosodi-n-propylamine	ND	80.0									
3&4-Methylphenol (m, p-cresol)	ND	30.0									
Nitrobenzene	ND	50.0									
Isophorone	ND	40.0									
2-Nitrophenol	ND	30.0									
2,4-Dimethylphenol	ND	30.0									
Bis(2-chloroethoxy)methane	ND	30.0									
2,4-Dichlorophenol	ND	30.0									
1,2,4-Trichlorobenzene	ND	30.0									
Naphthalene	ND	40.0									
4-Chloroaniline	ND	30.0									
Hexachlorobutadiene	ND	30.0									
4-Chloro-3-methylphenol	ND	30.0									
2-Methylnaphthalene	ND	30.0									
1-Methylnaphthalene	ND	30.0									
Hexachlorocyclopentadiene	ND	100									
2,4,6-Trichlorophenol	ND	30.0									
2,4,5-Trichlorophenol	ND	30.0									
2-Chloronaphthalene	ND	30.0									
2-Nitroaniline	ND	50.0									
Acenaphthene	ND	30.0									
Dimethylphthalate	ND	3,500									
2,6-Dinitrotoluene	ND	40.0									

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **MB-39489** SampType: **MBLK** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **MBLKS** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701600**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthylene	ND	30.0									
2,4-Dinitrophenol	ND	300									
Dibenzofuran	ND	30.0									
2,4-Dinitrotoluene	ND	60.0									
4-Nitrophenol	ND	200									
Fluorene	ND	30.0									
4-Chlorophenyl phenyl ether	ND	30.0									
Diethylphthalate	ND	750									
4,6-Dinitro-2-methylphenol	ND	250									
4-Bromophenyl phenyl ether	ND	30.0									
Hexachlorobenzene	ND	30.0									
Pentachlorophenol	ND	200									
Phenanthrene	ND	30.0									
Anthracene	ND	30.0									
Carbazole	ND	30.0									
Di-n-butylphthalate	ND	30.0									
Fluoranthene	ND	30.0									
Pyrene	ND	150									
Butyl Benzylphthalate	ND	50.0									
bis(2-Ethylhexyl)adipate	ND	200									
Benz(a)anthracene	ND	30.0									
Chrysene	ND	50.0									
bis (2-Ethylhexyl) phthalate	ND	40.0									
Di-n-octyl phthalate	ND	75.0									
Benzo(b)fluoranthene	ND	100									
Benzo(k)fluoranthene	ND	30.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	200									
Dibenz(a,h)anthracene	ND	100									
Benzo(g,h,i)perylene	ND	100									
Surr: 2,4,6-Tribromophenol	1,860		2,000		92.9	16.2	150				
Surr: 2-Fluorobiphenyl	990		1,000		99.0	25.3	139				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **MB-39489**	SampType: **MBLK**	Units: **µg/Kg**	Prep Date: **2/20/2023**	RunNo: **82015**
Client ID: **MBLKS**	Batch ID: **39489**		Analysis Date: **2/21/2023**	SeqNo: **1701600**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	955		1,000		95.5	12.7	143				
Surr: Phenol-d6	2,220		2,000		111	21.4	139				
Surr: p-Terphenyl	923		1,000		92.3	37.1	144				

NOTES:
Q - Associated calibration verification is below acceptance criteria. Result may be low-biased.

Sample ID: **LCS-39489**	SampType: **LCS**	Units: **µg/Kg**	Prep Date: **2/20/2023**	RunNo: **82015**
Client ID: **LCSS**	Batch ID: **39489**		Analysis Date: **2/21/2023**	SeqNo: **1701601**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	2,610	30.0	2,000	0	131	54	114				S
Bis(2-chloroethyl) ether	2,010	50.0	2,000	0	101	60.2	120				
2-Chlorophenol	1,980	40.0	2,000	0	98.8	63.8	111				
1,3-Dichlorobenzene	1,940	40.0	2,000	0	96.9	64.5	110				
1,4-Dichlorobenzene	1,940	30.0	2,000	0	96.9	64.3	112				
1,2-Dichlorobenzene	1,920	40.0	2,000	0	96.0	64.2	112				
Benzyl alcohol	1,640	150	2,000	0	82.0	5	159				
2-Methylphenol (o-cresol)	2,200	40.0	2,000	0	110	51.8	116				
Hexachloroethane	1,920	40.0	2,000	0	95.9	62.1	114				
N-Nitrosodi-n-propylamine	1,980	80.0	2,000	0	99.2	59.1	123				
3&4-Methylphenol (m, p-cresol)	2,780	30.0	2,000	0	139	55.3	120				S
Nitrobenzene	1,920	50.0	2,000	0	96.0	63.1	119				
Isophorone	2,000	40.0	2,000	0	100	63.7	120				
2-Nitrophenol	1,880	30.0	2,000	0	94.2	66.4	116				
2,4-Dimethylphenol	2,450	30.0	2,000	0	123	55.5	112				S
Bis(2-chloroethoxy)methane	1,990	30.0	2,000	0	99.3	64.6	112				
2,4-Dichlorophenol	2,430	30.0	2,000	0	122	57.1	116				S
1,2,4-Trichlorobenzene	1,990	30.0	2,000	0	99.4	64.7	110				
Naphthalene	1,910	40.0	2,000	0	95.7	64.7	110				
4-Chloroaniline	1,890	30.0	2,000	0	94.6	64.6	112				
Hexachlorobutadiene	1,990	30.0	2,000	0	99.5	64.7	116				
4-Chloro-3-methylphenol	2,540	30.0	2,000	0	127	50.9	128				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-39489** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **LCSS** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701601**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylnaphthalene	1,930	30.0	2,000	0	96.5	63.6	119				
1-Methylnaphthalene	1,940	30.0	2,000	0	97.0	64.1	114				
Hexachlorocyclopentadiene	2,120	100	2,000	0	106	34.7	141				
2,4,6-Trichlorophenol	2,070	30.0	2,000	0	103	60.9	123				
2,4,5-Trichlorophenol	2,360	30.0	2,000	0	118	48.7	128				
2-Chloronaphthalene	1,920	30.0	2,000	0	95.8	65.4	114				
2-Nitroaniline	2,020	50.0	2,000	0	101	62.3	127				
Acenaphthene	1,970	30.0	2,000	0	98.7	63.3	118				
Dimethylphthalate	2050	3,500	2,000	0	102	61.9	123				
2,6-Dinitrotoluene	2,040	40.0	2,000	0	102	64.6	123				
Acenaphthylene	2,020	30.0	2,000	0	101	61.9	112				
2,4-Dinitrophenol	1,650	300	4,000	0	41.3	5	132				
Dibenzofuran	1,970	30.0	2,000	0	98.4	60.2	116				
2,4-Dinitrotoluene	1,950	60.0	2,000	0	97.7	63.4	124				
4-Nitrophenol	2,540	200	2,000	0	127	8.76	130				
Fluorene	1,950	30.0	2,000	0	97.7	62.4	115				
4-Chlorophenyl phenyl ether	2,000	30.0	2,000	0	100	58.8	121				
Diethylphthalate	1,870	750	2,000	0	93.4	61.9	111				
4,6-Dinitro-2-methylphenol	1,430	250	2,000	0	71.6	5	134				
4-Bromophenyl phenyl ether	2,040	30.0	2,000	0	102	59.1	118				
Hexachlorobenzene	1,980	30.0	2,000	0	99.1	60.4	119				
Pentachlorophenol	2,150	200	2,000	0	107	26.5	130				
Phenanthrene	1,930	30.0	2,000	0	96.7	57.9	116				
Anthracene	1,900	30.0	2,000	0	94.9	56.1	118				
Carbazole	2,000	30.0	2,000	0	100	48.9	128				
Di-n-butylphthalate	1,950	30.0	2,000	0	97.6	58.9	123				
Fluoranthene	2,050	30.0	2,000	0	102	54.7	126				
Pyrene	2,040	150	2,000	0	102	53.5	126				
Butyl Benzylphthalate	2,010	50.0	2,000	0	100	54.4	131				
bis(2-Ethylhexyl)adipate	2,020	200	2,000	0	101	51	133				
Benz(a)anthracene	2,070	30.0	2,000	0	104	40.1	140				
Chrysene	1,880	50.0	2,000	0	94.1	59.7	116				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **LCS-39489** SampType: **LCS** Units: **µg/Kg** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **LCSS** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701601**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
bis (2-Ethylhexyl) phthalate	1,980	40.0	2,000	0	98.8	51.2	137				
Di-n-octyl phthalate	1,900	75.0	2,000	0	95.0	48.1	152				
Benzo(b)fluoranthene	1,960	100	2,000	0	97.9	57.9	122				
Benzo(k)fluoranthene	1,990	30.0	2,000	0	99.6	49	124				
Benzo(a)pyrene	2,040	40.0	2,000	0	102	53	108				
Indeno(1,2,3-cd)pyrene	2,060	200	2,000	0	103	56	124				
Dibenz(a,h)anthracene	2,110	100	2,000	0	105	55.8	125				
Benzo(g,h,i)perylene	2,020	100	2,000	0	101	61.3	112				
Surr: 2,4,6-Tribromophenol	2,290		2,000		115	16.2	150				
Surr: 2-Fluorobiphenyl	1,070		1,000		107	25.3	139				
Surr: Nitrobenzene-d5	1,080		1,000		108	12.7	143				
Surr: Phenol-d6	2,460		2,000		123	21.4	139				
Surr: p-Terphenyl	1,060		1,000		106	37.1	144				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect; result meets QC requirements.

Sample ID: **2302322-001AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701604**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	1,640	29.3	1,951	0	84.0	31.6	121				
Bis(2-chloroethyl) ether	1,250	48.8	1,951	0	64.0	26.1	123				
2-Chlorophenol	1,240	39.0	1,951	0	63.6	26.8	122				
1,3-Dichlorobenzene	1,290	39.0	1,951	0	66.0	13	122				
1,4-Dichlorobenzene	1,200	29.3	1,951	0	61.6	14.1	122				
1,2-Dichlorobenzene	1,260	39.0	1,951	0	64.5	18.6	122				
Benzyl alcohol	1,070	146	1,951	0	54.8	5	142				
2-Methylphenol (o-cresol)	1,410	39.0	1,951	0	72.4	36.5	121				
Hexachloroethane	1,100	39.0	1,951	0	56.3	9.86	123				
N-Nitrosodi-n-propylamine	1,320	78.0	1,951	0	67.6	29.5	128				
3&4-Methylphenol (m, p-cresol)	1,870	29.3	1,951	0	95.9	30.6	127				
Nitrobenzene	1,220	48.8	1,951	0	62.8	30.8	123				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **2302322-001AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701604**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isophorone	1,350	39.0	1,951	0	69.3	30.8	128				
2-Nitrophenol	1,250	29.3	1,951	0	63.9	30.3	126				
2,4-Dimethylphenol	1,610	29.3	1,951	0	82.4	32.2	120				
Bis(2-chloroethoxy)methane	1,240	29.3	1,951	0	63.8	34.3	120				
2,4-Dichlorophenol	1,620	29.3	1,951	0	83.2	33.7	123				
1,2,4-Trichlorobenzene	1,300	29.3	1,951	0	66.7	33.7	116				
Naphthalene	1,310	39.0	1,951	0	67.3	33.3	119				
4-Chloroaniline	1,090	29.3	1,951	0	55.8	10.2	120				
Hexachlorobutadiene	1,400	29.3	1,951	0	71.8	32.2	118				
4-Chloro-3-methylphenol	2,000	29.3	1,951	0	102	35.4	133				
2-Methylnaphthalene	1,330	29.3	1,951	0	68.2	39.4	117				
1-Methylnaphthalene	1,330	29.3	1,951	0	68.3	37.1	121				
Hexachlorocyclopentadiene	682	97.5	1,951	0	35.0	5	134				
2,4,6-Trichlorophenol	1,500	29.3	1,951	0	76.6	37.2	129				
2,4,5-Trichlorophenol	1,780	29.3	1,951	0	91.4	37.1	124				
2-Chloronaphthalene	1,340	29.3	1,951	0	68.7	40.8	117				
2-Nitroaniline	1,440	48.8	1,951	0	74.0	40.4	131				
Acenaphthene	1,370	29.3	1,951	8.010	69.6	34.1	119				
Dimethylphthalate	1490	3,410	1,951	0	76.2	37	126				
2,6-Dinitrotoluene	1,460	39.0	1,951	0	75.0	43.4	123				
Acenaphthylene	1,410	29.3	1,951	0	72.1	38.5	115				
2,4-Dinitrophenol	1,460	293	3,902	0	37.5	5	127				
Dibenzofuran	1,330	29.3	1,951	7.478	67.7	39	119				
2,4-Dinitrotoluene	1,370	58.5	1,951	0	70.1	40.1	127				
4-Nitrophenol	2,070	195	1,951	0	106	7.49	136				
Fluorene	1,350	29.3	1,951	14.93	68.2	34.2	124				
4-Chlorophenyl phenyl ether	1,390	29.3	1,951	0	71.4	38.8	124				
Diethylphthalate	1,300	732	1,951	0	66.5	40.1	122				
4,6-Dinitro-2-methylphenol	1,280	244	1,951	0	65.7	5	142				
4-Bromophenyl phenyl ether	1,400	29.3	1,951	0	71.9	38.5	124				
Hexachlorobenzene	1,370	29.3	1,951	0	70.2	40.4	122				
Pentachlorophenol	1,630	195	1,951	0	83.6	16.6	148				

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **2302322-001AMS** SampType: **MS** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701604**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenanthrene	1,320	29.3	1,951	67.78	64.3	29.1	128				
Anthracene	1,360	29.3	1,951	38.10	67.9	32.5	124				
Carbazole	1,390	29.3	1,951	9.162	70.8	33.5	126				
Di-n-butylphthalate	1,420	29.3	1,951	0	72.5	38.3	134				
Fluoranthene	1,590	29.3	1,951	190.7	71.5	30	132				
Pyrene	1,550	146	1,951	187.5	70.1	30.9	130				
Butyl Benzylphthalate	1,530	48.8	1,951	0	78.4	35	147				
bis(2-Ethylhexyl)adipate	1,570	195	1,951	0	80.3	34.2	149				
Benz(a)anthracene	1,570	29.3	1,951	107.9	74.8	25	134				
Chrysene	1,370	48.8	1,951	168.4	61.8	28.6	125				
bis (2-Ethylhexyl) phthalate	1,590	39.0	1,951	134.1	74.7	22.9	158				
Di-n-octyl phthalate	1,540	73.2	1,951	0	79.1	36.9	157				
Benzo(b)fluoranthene	1,510	97.5	1,951	194.6	67.6	21.4	140				
Benzo(k)fluoranthene	1,420	29.3	1,951	69.76	69.1	20.2	139				
Benzo(a)pyrene	1,590	39.0	1,951	133.6	74.7	17.6	149				
Indeno(1,2,3-cd)pyrene	1,630	195	1,951	82.66	79.5	22.7	139				
Dibenz(a,h)anthracene	1,670	97.5	1,951	51.66	83.0	23.7	145				
Benzo(g,h,i)perylene	1,510	97.5	1,951	97.60	72.2	18.6	134				
Surr: 2,4,6-Tribromophenol	1,790		1,951		91.8	16.2	150				
Surr: 2-Fluorobiphenyl	743		975.4		76.1	25.3	139				
Surr: Nitrobenzene-d5	690		975.4		70.8	12.7	143				
Surr: Phenol-d6	1,580		1,951		81.1	21.4	139				
Surr: p-Terphenyl	742		975.4		76.1	37.1	144				

Sample ID: **2302322-001AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701605**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	1,630	29.3	1,952	0	83.7	31.6	121	1,639	0.283	50	
Bis(2-chloroethyl) ether	1,220	48.8	1,952	0	62.5	26.1	123	1,248	2.25	50	
2-Chlorophenol	1,240	39.0	1,952	0	63.8	26.8	122	1,240	0.350	50	

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **2302322-001AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701605**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	1,240	39.0	1,952	0	63.5	13	122	1,288	3.82	50	
1,4-Dichlorobenzene	1,240	29.3	1,952	0	63.4	14.1	122	1,202	2.83	50	
1,2-Dichlorobenzene	1,210	39.0	1,952	0	61.8	18.6	122	1,258	4.25	50	
Benzyl alcohol	1,120	146	1,952	0	57.4	5	142	1,069	4.67	50	
2-Methylphenol (o-cresol)	1,420	39.0	1,952	0	73.0	36.5	121	1,413	0.869	50	
Hexachloroethane	1,020	39.0	1,952	0	52.3	9.86	123	1,098	7.33	50	
N-Nitrosodi-n-propylamine	1,270	78.1	1,952	0	65.2	29.5	128	1,319	3.62	50	
3&4-Methylphenol (m, p-cresol)	1,840	29.3	1,952	0	94.2	30.6	127	1,871	1.78	50	
Nitrobenzene	1,170	48.8	1,952	0	60.1	30.8	123	1,224	4.34	50	
Isophorone	1,320	39.0	1,952	0	67.4	30.8	128	1,351	2.62	50	
2-Nitrophenol	1,300	29.3	1,952	0	66.8	30.3	126	1,247	4.50	50	
2,4-Dimethylphenol	1,600	29.3	1,952	0	82.1	32.2	120	1,607	0.295	50	
Bis(2-chloroethoxy)methane	1,230	29.3	1,952	0	62.9	34.3	120	1,245	1.36	50	
2,4-Dichlorophenol	1,670	29.3	1,952	0	85.7	33.7	123	1,624	2.95	50	
1,2,4-Trichlorobenzene	1,240	29.3	1,952	0	63.5	33.7	116	1,302	4.87	50	
Naphthalene	1,230	39.0	1,952	0	63.2	33.3	119	1,313	6.28	50	
4-Chloroaniline	1,090	29.3	1,952	0	55.7	10.2	120	1,089	0.172	50	
Hexachlorobutadiene	1,340	29.3	1,952	0	68.7	32.2	118	1,400	4.33	50	
4-Chloro-3-methylphenol	1,920	29.3	1,952	0	98.3	35.4	133	1,999	4.14	50	
2-Methylnaphthalene	1,270	29.3	1,952	0	65.0	39.4	117	1,330	4.76	50	
1-Methylnaphthalene	1,290	29.3	1,952	0	66.3	37.1	121	1,332	2.82	50	
Hexachlorocyclopentadiene	489	97.6	1,952	0	25.1	5	134	681.9	32.9	50	
2,4,6-Trichlorophenol	1,540	29.3	1,952	0	78.9	37.2	129	1,495	2.98	50	
2,4,5-Trichlorophenol	1,640	29.3	1,952	0	84.2	37.1	124	1,783	8.12	50	
2-Chloronaphthalene	1,270	29.3	1,952	0	65.2	40.8	117	1,340	5.11	50	
2-Nitroaniline	1,390	48.8	1,952	0	71.3	40.4	131	1,444	3.73	50	
Acenaphthene	1,350	29.3	1,952	8.010	68.8	34.1	119	1,367	1.12	50	
Dimethylphthalate	1420	3,420	1,952	0	72.6	37	126	0		50	
2,6-Dinitrotoluene	1,430	39.0	1,952	0	73.2	43.4	123	1,464	2.38	50	
Acenaphthylene	1,390	29.3	1,952	0	71.2	38.5	115	1,407	1.21	50	
2,4-Dinitrophenol	1,270	293	3,904	0	32.4	5	127	1,464	14.6	50	
Dibenzofuran	1,250	29.3	1,952	7.478	63.8	39	119	1,329	5.90	50	

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **2302322-001AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701605**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	1,330	58.6	1,952	0	68.1	40.1	127	1,368	2.88	50	
4-Nitrophenol	2,210	195	1,952	0	113	7.49	136	2,066	6.68	50	
Fluorene	1,290	29.3	1,952	14.93	65.4	34.2	124	1,346	4.06	50	
4-Chlorophenyl phenyl ether	1,330	29.3	1,952	0	68.0	38.8	124	1,393	4.80	50	
Diethylphthalate	1,270	732	1,952	0	64.8	40.1	122	1,298	2.56	50	
4,6-Dinitro-2-methylphenol	1,230	244	1,952	0	63.0	5	142	1,282	4.15	50	
4-Bromophenyl phenyl ether	1,390	29.3	1,952	0	71.3	38.5	124	1,402	0.668	50	
Hexachlorobenzene	1,310	29.3	1,952	0	67.3	40.4	122	1,369	4.10	50	
Pentachlorophenol	1,510	195	1,952	0	77.2	16.6	148	1,632	7.94	50	
Phenanthrene	1,310	29.3	1,952	67.78	63.8	29.1	128	1,322	0.738	50	
Anthracene	1,320	29.3	1,952	38.10	65.6	32.5	124	1,362	3.26	50	
Carbazole	1,350	29.3	1,952	9.162	68.6	33.5	126	1,391	3.09	50	
Di-n-butylphthalate	1,390	29.3	1,952	0	71.0	38.3	134	1,415	2.14	50	
Fluoranthene	1,530	29.3	1,952	190.7	68.4	30	132	1,586	3.90	50	
Pyrene	1,510	146	1,952	187.5	67.7	30.9	130	1,554	2.99	50	
Butyl Benzylphthalate	1,490	48.8	1,952	0	76.4	35	147	1,530	2.55	50	
bis(2-Ethylhexyl)adipate	1,540	195	1,952	0	78.8	34.2	149	1,566	1.73	50	
Benz(a)anthracene	1,470	29.3	1,952	107.9	70.0	25	134	1,568	6.20	50	
Chrysene	1,340	48.8	1,952	168.4	60.2	28.6	125	1,373	2.20	50	
bis (2-Ethylhexyl) phthalate	1,570	39.0	1,952	134.1	73.4	22.9	158	1,592	1.60	50	
Di-n-octyl phthalate	1,550	73.2	1,952	0	79.4	36.9	157	1,544	0.457	50	
Benzo(b)fluoranthene	1,510	97.6	1,952	194.6	67.3	21.4	140	1,513	0.295	50	
Benzo(k)fluoranthene	1,380	29.3	1,952	69.76	67.1	20.2	139	1,418	2.78	50	
Benzo(a)pyrene	1,510	39.0	1,952	133.6	70.6	17.6	149	1,591	5.12	50	
Indeno(1,2,3-cd)pyrene	1,600	195	1,952	82.66	78.0	22.7	139	1,635	1.83	50	
Dibenz(a,h)anthracene	1,700	97.6	1,952	51.66	84.5	23.7	145	1,671	1.84	50	
Benzo(g,h,i)perylene	1,510	97.6	1,952	97.60	72.3	18.6	134	1,507	0.149	50	
Surr: 2,4,6-Tribromophenol	1,580		1,952		80.8	16.2	150		0		
Surr: 2-Fluorobiphenyl	671		975.9		68.7	25.3	139		0		
Surr: Nitrobenzene-d5	639		975.9		65.5	12.7	143		0		
Surr: Phenol-d6	1,510		1,952		77.5	21.4	139		0		
Surr: p-Terphenyl	697		975.9		71.4	37.1	144		0		

Work Order: 2302322
CLIENT: Anchor QEA
Project: CalPortland Maintenance Dredging

QC SUMMARY REPORT

Semivolatile Organic Compounds by EPA Method 8270

Sample ID: **2302322-001AMSD** SampType: **MSD** Units: **µg/Kg-dry** Prep Date: **2/20/2023** RunNo: **82015**
Client ID: **CPMD-SS-01-021323** Batch ID: **39489** Analysis Date: **2/21/2023** SeqNo: **1701605**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample Log-In Check List

Client Name:	AQEA	Work Order Number:	2302322
Logged by:	Brianna Barnes	Date Received:	2/17/2023 3:06:00 PM

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Present ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☑	No ☐	NA ☐

Person Notified:	Josh Jensen, Lydia Greav	Date:	2/17/2023
By Whom:	Brianna Barnes	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Confirming COC edits, temperature exceedance.		
Client Instructions:	Proceed.		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	10.0

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

2302378

2302322

Chain of Custody Record & Laboratory Analysis Request

Laboratory Name: ARI
Date: 2/13/23
Project Name: CalPortland Maintenance Dredging
Project Number: 200217-01.01
Project Manager: Josh Jensen
Phone Number: 206-903-3374
Shipment Method: Drop off

Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Test Parameters: Cr VI, TOC, TVS	Metals	PAH/PCB/SVOC/TBT	Dioxins	Grainsize, MC	VOC	HERBICIDES	PESTICIDES	Comments/Preservation
1	CPMD-SS-01-021323	2/13/23 0932	SE	1	X	X	X	X	X	X	X	X	
2	CPMD-SS-02-021323	2/13/23 1038	SE	1	X	X	X	X	X	X	X	X	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

Notes:

Relinquished By: Jake Light — Company: Anchor QEA, LLC — 2/13/23 1230
Signature/Printed Name — Date/Time

Received By: Jacob Hallenbeck — Company: AR, LLC — 02/13/23 1234
Signature/Printed Name — Date/Time

Relinquished By: Phillip Bates — Company: AR — 2/17/23 1427
Signature/Printed Name — Date/Time

Received By: Lexus Sullivan — Company: AQ — 2/17/23 14:27
Signature/Printed Name — Date/Time

Lexus Sullivan AQ 2/17/23 15:06

02/17/23 15:06

2302378

2302322

Chain of Custody Record & Laboratory Analysis Request

Laboratory Name: ARI
Date: 2/13/23
Project Name: CalPortland Maintenance Dredging
Project Number: 200217-01.01
Project Manager: Josh Jensen jjensen@anchorQEA.com
Phone Number: 206-903-3374
Shipment Method: Drop off

ANCHOR QEA

Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Cr VI, TOC, TVS	Metals	PAH/PCB/SVOC/TBT	Dioxins	Grainsize, MC	VOC	HERBICIDES	PESTICIDES	Comments/Preservation
1	CPMD-SS-01-021323	2/13/23 0932	SE	1	X	X	X	X	X	X	X	X	
2	CPMD-SS-02-021323	2/13/23 1038	SE	1	X	X	X	X	X	X	X	X	
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

Test Parameters

Notes: Metals: Priority Pollutants and Ba
TAT: ASAP
Edits by BB 2/17/23

Relinquished By: Jake Light Company: Anchor QEA, LLC 2/13/23 1230
Signature/Printed Name Date/Time

Received By: Jacob Hallenbeck Company: ARI, LLC 2/13/23 1230
Signature/Printed Name Date/Time

Relinquished By: Phillip Bates Company: AR 2/17/23 1427
Signature/Printed Name Date/Time

Received By: Lexus Sullivan Company: AQ 2/17/23 14:27
Signature/Printed Name Date/Time

Lexus Sullivan AQ 2/17/23 15:06

02/17/23 15:06

Analytical Resources, LLC
Analytical Chemists and Consultants

21 February 2023

Jennifer Marsalla
Anchor QEA, LLC
1201 3rd Ave, Suite 2600
Seattle, WA 98101

RE: CalPortland Maintenance Dredge 2023 (200217-01.01)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

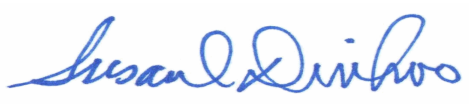
Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)	Associated SDG ID(s)
23B0278	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, LLC



Susan Dunnihoo For Shelly Fishel, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

23B0278

Chain of Custody Record & Laboratory Analysis Request

Laboratory Name: ARI
Date: 2/13/23
Project Name: CalPortland Maintenance Dredging
Project Number: 200217-01.01
Project Manager: Josh Jenson
Phone Number: 206-903-3374
Shipment Method: Drop off

Line	Field Sample ID	Collection Date/Time	Matrix	No. of Containers	Test Parameters: Cr VI, TOC, TVS	Metals	PAH/PCB/SVOC/TBT	Dioxins	Grainsize, ML	VOC	Comments/Preservation
1	CPMD-SS-01-021323	2/13/23 0932	SE	7	X	X	X	X	X	X	
2	CPMD-SS-02-021323	2/13/23 1038	SE	7	X	X	X	X	X	X	
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											

Notes:

Relinquished By:	Company:	Received By:	Company:
Jake Light	Anchor QEA, LLC	Jacob Hatteberg	ARI, LLC
Signature/Printed Name	Date/Time: 2/13/23 1230	Signature/Printed Name	Date/Time: 02/13/23 1234
Relinquished By:	Company:	Received By:	Company:
Signature/Printed Name	Date/Time	Signature/Printed Name	Date/Time

Analytical Resources, LLC
Analytical Chemists and Consultants

SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order:23B0278

SENDING LABORATORY:

Analytical Resources, LLC
4611 S. 134th Place, Suite 100
Tukwila, WA 98168
Phone: (206) 695-6200
Fax: (206) 695-6202
Project Manager: Shelly Fishel
E-Mail: shelly.fishel@arilabs.com

RECEIVING LABORATORY:

AmTest Laboratories
13600 NE 126th Pl Suite C
Kirkland, WA 98034
Phone :425-885-1664
Fax: -

PLEASE SEND DATA AND INVOICE TO subdata@arilabs.com

Analysis	Due	Expires	Sub Laboratory ID	Comments
Sample ID: 23B0278-01 **Sampled: 02/13/23 09:32 Matrix: Solid**				
Moisture Content ASTM D2216 (Subc)	02/27/23	02/13/24 09:32		
Grainsize ASTM D422/421 (Subc)	02/27/23	02/13/24 09:32		
Containers Supplied:				
23B0278-01 A Ziploc Bag, Quart				
Sample ID: 23B0278-02 **Sampled: 02/13/23 10:38 Matrix: Solid**				
Moisture Content ASTM D2216 (Subc)	02/27/23	02/13/24 10:38		
Grainsize ASTM D422/421 (Subc)	02/27/23	02/13/24 10:38		
Containers Supplied:				
23B0278-02 A Ziploc Bag, Quart				

T=5.1°C

Released By	Date	Received By	Date
	02/14/23 10:26	KH	2/14/23 1029

Printed: 2/13/2023 2:08:56PM

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CPMD-SS-01-021323	23B0278-01	Solid	13-Feb-2023 09:32	13-Feb-2023 12:30
CPMD-SS-02-021323	23B0278-02	Solid	13-Feb-2023 10:38	13-Feb-2023 12:30

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Work Order Case Narrative

Client: Anchor QEA, LLC
Project: CalPortland Maintenance Dredge 2023
Work Order: 23B0278

Sample receipt

Samples as listed on the preceding page were received 13-Feb-2023 12:30 under ARI work order 23B0278. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Several analyses were cancelled due to expedited requirements that could not be met.

Grainsize

The samples were submitted to AmTest Laboratories for analysis. The AmTest report is included here in its entirety.

Volatiles - EPA Method SW8260D (Medium Level)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements, with accepted excursions outside the 20% window. Associated positive results have been "Q"-flagged.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Gasoline by NWTPH-g (GC/MS)

The sample(s) were analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits.

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries and relative percent difference (RPD) were within control limits.

Wet Chemistry

The sample(s) were prepared and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) were clean at the reporting limits.

The blank spike (BS/LCS) percent recoveries were within control limits.

The reference material (SRM) percent recoveries were within control limits.

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA Project Name: CalPortland Maint. Dredging

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 23B0278 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of the cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1230 3.3 _____ _____ _____ _____ _____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: TD09708

Cooler Accepted by: JS Date: 02/13/23 Time: 1234

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	(Bubble Wrap) (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
How were bottles sealed in plastic bags?	Individually	Grouped	(Not)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	(NA)	YES	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)	_____	

Were the sample(s) split by ARI? (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: [illegible] Date: 2-13-23 Time: _____ Labels checked by: _____

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 17 2023
Analytical Resources LLC
4611 S 134th Pl
Suite 100
Tukwila, WA 98168
Attention: SHELLY FISHEL

Dear SHELLY FISHEL:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
23B0278-01	Soil	23-A002866	Grain Size, CONV
23B0278-02	Soil	23-A002867	Grain Size, CONV

Your samples were received on Tuesday, February 14, 2023. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

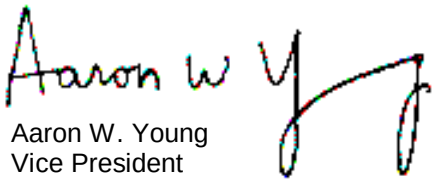
The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,



Aaron W. Young
Vice President

WO Number: 23B0278

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th Pl
Tukwila, WA 98168
Attention: SHELLY FISHEL
All results reported on a dry weight basis.

Date Received: 02/14/23
Date Reported: 2/17/23

AMTEST Identification Number **23-A002866**
Client Identification **23B0278-01**
Sampling Date **02/13/23, 09:32**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	41.6	%		0.1	SM 2540G	SF	02/14/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	< 0.1 %	GRAVEL	0.00	ASTM D422	SF	02/15/23
- 2	4.00	< 0.1 %			ASTM D422	SF	02/15/23
-1	2.00	< 0.1 %			ASTM D422	SF	02/15/23
0	1.00	0.10 %	SAND	16.9	ASTM D422	SF	02/15/23
+1	0.50	0.70 %			ASTM D422	SF	02/15/23
+ 2	0.25	3.00 %			ASTM D422	SF	02/15/23
+ 3	0.125	4.80 %			ASTM D422	SF	02/15/23
+ 4	0.063	8.30 %			ASTM D422	SF	02/15/23
+ 5	0.032	13.4 %	SILT	57.8	ASTM D422	SF	02/15/23
+ 6	0.016	15.3 %			ASTM D422	SF	02/15/23
+ 7	0.008	20.8 %			ASTM D422	SF	02/15/23
+ 8	0.004	8.30 %			ASTM D422	SF	02/15/23
+ 9	0.002	5.50 %	CLAY	25.3	ASTM D422	SF	02/15/23
+ 10	0.001	3.00 %			ASTM D422	SF	02/15/23
> + 10	< 0.001	16.8 %			ASTM D422	SF	02/15/23

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

Analytical Resources LLC
4611 S 134th Pl
Tukwila, WA 98168
Attention: SHELLY FISHEL
All results reported on a dry weight basis.

Date Received: 02/14/23
Date Reported: 2/17/23

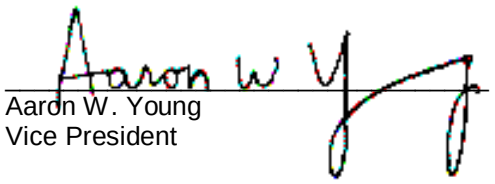
AMTEST Identification Number **23-A002867**
Client Identification **23B0278-02**
Sampling Date **02/13/23, 10:38**

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	41.6	%		0.1	SM 2540G	SF	02/14/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	0.40 %	GRAVEL	0.70	ASTM D422	SF	02/15/23
- 2	4.00	0.10 %			ASTM D422	SF	02/15/23
-1	2.00	0.20 %			ASTM D422	SF	02/15/23
0	1.00	0.10 %	SAND	20.1	ASTM D422	SF	02/15/23
+1	0.50	0.70 %			ASTM D422	SF	02/15/23
+ 2	0.25	2.50 %			ASTM D422	SF	02/15/23
+ 3	0.125	3.80 %			ASTM D422	SF	02/15/23
+ 4	0.063	13.0 %			ASTM D422	SF	02/15/23
+ 5	0.032	8.70 %	SILT	53.7	ASTM D422	SF	02/15/23
+ 6	0.016	21.0 %			ASTM D422	SF	02/15/23
+ 7	0.008	15.1 %			ASTM D422	SF	02/15/23
+ 8	0.004	8.90 %			ASTM D422	SF	02/15/23
+ 9	0.002	5.10 %	CLAY	25.5	ASTM D422	SF	02/15/23
+ 10	0.001	2.40 %			ASTM D422	SF	02/15/23
> + 10	< 0.001	18.0 %			ASTM D422	SF	02/15/23



Aaron W. Young
Vice President

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 23-A002866 to 23-A002867

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
23-A002207	-2.25	%	1.70	2.60	42.
23-A002207	-2.25	%	1.70	1.70	0.00
23-A002207	- 2	%	0.40	0.50	22.
23-A002207	- 2	%	0.40	0.20	67.
23-A002207	-1	%	1.60	1.90	17.
23-A002207	-1	%	1.60	1.40	13.
23-A002207	0	%	2.90	3.20	9.8
23-A002207	0	%	2.90	2.90	0.00
23-A002207	+1	%	15.8	13.0	19.
23-A002207	+1	%	15.8	14.2	11.
23-A002207	+ 2	%	56.6	54.1	4.5
23-A002207	+ 2	%	56.6	58.7	3.6
23-A002207	+ 3	%	12.3	15.7	24.
23-A002207	+ 3	%	12.3	11.2	9.4
23-A002207	+ 4	%	1.50	1.30	14.
23-A002207	+ 4	%	1.50	2.30	42.
23-A002207	+ 5	%	0.30	0.20	40.
23-A002207	+ 5	%	0.30	0.20	40.
23-A002207	+ 6	%	0.30	0.50	50.
23-A002207	+ 6	%	0.30	0.80	91.
23-A002207	+ 7	%	0.80	0.90	12.
23-A002207	+ 7	%	0.80	0.50	46.
23-A002207	+ 8	%	0.40	1.00	86.
23-A002207	+ 8	%	0.40	0.20	67.
23-A002207	+ 9	%	< 0.1	0.10	
23-A002207	+ 9	%	< 0.1	< 0.1	
23-A002207	+ 10	%	< 0.1	< 0.1	
23-A002207	+ 10	%	< 0.1	< 0.1	
23-A002207	> + 10	%	5.50	4.90	12.
23-A002207	> + 10	%	5.50	5.50	0.00
23-A002207	Gravel	%	3.70	5.00	30.
23-A002207	Gravel	%	3.70	3.30	11.
23-A002207	Sand	%	89.1	87.3	2.0
23-A002207	Sand	%	89.1	89.3	0.22
23-A002207	Silt	%	1.80	2.60	36.
23-A002207	Silt	%	1.80	1.70	5.7
23-A002207	Clay	%	5.50	5.00	9.5

DUPLICATES continued....

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
23-A002207	Clay	%	5.50	5.50	0.00

Analytical Resources, LLC
Analytical Chemists and Consultants

SUBCONTRACT ORDER
To: AmTest Laboratories
ARI Work Order:23B0278

SENDING LABORATORY:

Analytical Resources, LLC
4611 S. 134th Place, Suite 100
Tukwila, WA 98168
Phone: (206) 695-6200
Fax: (206) 695-6202
Project Manager: Shelly Fishel
E-Mail: shelly.fishel@arilabs.com

RECEIVING LABORATORY:

AmTest Laboratories
13600 NE 126th Pl Suite C
Kirkland, WA 98034
Phone :425-885-1664
Fax: -

PLEASE SEND DATA AND INVOICE TO subdata@arilabs.com

Analysis	Due	Expires	Sub Laboratory ID	Comments
Sample ID: 23B0278-01 **Sampled: 02/13/23 09:32 Matrix: Solid**			2866	
Moisture Content ASTM D2216 (Subc)	02/27/23	02/13/24 09:32		
Grainsize ASTM D422/421 (Subc)	02/27/23	02/13/24 09:32		
Containers Supplied:				
23B0278-01 A Ziploc Bag, Quart				
Sample ID: 23B0278-02 **Sampled: 02/13/23 10:38 Matrix: Solid**			2867	
Moisture Content ASTM D2216 (Subc)	02/27/23	02/13/24 10:38		
Grainsize ASTM D422/421 (Subc)	02/27/23	02/13/24 10:38		
Containers Supplied:				
23B0278-02 A Ziploc Bag, Quart				

T=5.1°C

Released By	Date	Received By	Date
	02/14/23 10:26	KH	2/14/23 1029
Released By	Date	Received By	Date

Printed: 2/13/2023 2:08:56PM

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D MED — Sampled: 02/13/2023 09:32
Instrument: NT5 Analyst: PB — Analyzed: 02/15/2023 17:25

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: No Prep - Volatiles — Extract ID: 23B0278-01 F
Preparation Batch: BLB0398 — Sample Size: 3.491 g (wet) — Dry Weight:1.52 g
Prepared: 02/15/2023 — Final Volume: 5 g — % Solids: 43.46

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	50	87.1	230	ND	ug/kg	U
Vinyl Chloride	75-01-4	50	77.2	230	ND	ug/kg	U
Bromomethane	74-83-9	50	89.4	230	159	ug/kg	J
Chloroethane	75-00-3	50	286	460	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	50	224	460	ND	ug/kg	U
Acrolein	107-02-8	50	403	1150	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	50	195	460	ND	ug/kg	U
Acetone	67-64-1	50	1460	2300	ND	ug/kg	U
1,1-Dichloroethene	75-35-4	50	85.3	230	ND	ug/kg	U
Iodomethane	74-88-4	50	208	230	ND	ug/kg	U
Methylene Chloride	75-09-2	50	1000	1150	ND	ug/kg	U
Acrylonitrile	107-13-1	50	455	1150	ND	ug/kg	U
Carbon Disulfide	75-15-0	50	76.1	230	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	50	121	230	ND	ug/kg	U
Vinyl Acetate	108-05-4	50	748	1150	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	50	65.0	230	ND	ug/kg	U
2-Butanone	78-93-3	50	561	1150	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	50	70.6	230	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	50	59.1	230	ND	ug/kg	U
Chloroform	67-66-3	50	66.2	230	ND	ug/kg	U
Bromochloromethane	74-97-5	50	90.8	230	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	50	137	230	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	50	64.8	230	ND	ug/kg	U
Carbon tetrachloride	56-23-5	50	71.7	230	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	50	53.8	230	ND	ug/kg	U
Benzene	71-43-2	50	37.9	230	ND	ug/kg	U
Trichloroethene	79-01-6	50	58.6	230	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	50	76.3	230	ND	ug/kg	U
Bromodichloromethane	75-27-4	50	59.1	230	ND	ug/kg	U
Dibromomethane	74-95-3	50	81.8	230	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	50	693	1150	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	50	314	1150	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	50	60.2	230	ND	ug/kg	U
Toluene	108-88-3	50	56.8	230	ND	ug/kg	U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D MED
Instrument: NT5 Analyst: PB

Sampled: 02/13/2023 09:32
Analyzed: 02/15/2023 17:25

Analysis by: Analytical Resources, LLC

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	50	94.2	230	ND	ug/kg	U
2-Hexanone	591-78-6	50	292	1150	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	50	61.6	230	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	50	53.8	230	ND	ug/kg	U
Tetrachloroethene	127-18-4	50	45.5	230	ND	ug/kg	U
Dibromochloromethane	124-48-1	50	61.4	230	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	50	70.8	230	ND	ug/kg	U
Chlorobenzene	108-90-7	50	47.6	230	ND	ug/kg	U
Ethylbenzene	100-41-4	50	52.2	230	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	50	81.4	230	ND	ug/kg	U
m,p-Xylene	179601-23-1	50	114	460	ND	ug/kg	U
o-Xylene	95-47-6	50	54.9	230	ND	ug/kg	U
Xylenes, total	1330-20-7	50	160	460	ND	ug/kg	U
Styrene	100-42-5	50	56.5	230	ND	ug/kg	U
Bromoform	75-25-2	50	106	230	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	50	63.0	230	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	50	344	460	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	50	633	1150	ND	ug/kg	U
n-Propylbenzene	103-65-1	50	54.2	230	ND	ug/kg	U
Bromobenzene	108-86-1	50	56.8	230	ND	ug/kg	U
Isopropyl Benzene	98-82-8	50	60.2	230	ND	ug/kg	U
2-Chlorotoluene	95-49-8	50	49.6	230	ND	ug/kg	U
4-Chlorotoluene	106-43-4	50	67.1	230	ND	ug/kg	U
t-Butylbenzene	98-06-6	50	57.7	230	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	50	58.1	230	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	50	60.9	230	ND	ug/kg	U
s-Butylbenzene	135-98-8	50	55.4	230	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	50	66.6	230	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	50	56.1	230	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	50	99.1	230	ND	ug/kg	U
n-Butylbenzene	104-51-8	50	64.4	230	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	50	150	230	ND	ug/kg	U
1,2-Dibromo-3-Chloropropane	96-12-8	50	542	1150	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	50	418	1150	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	50	414	1150	ND	ug/kg	U
Naphthalene	91-20-3	50	566	1150	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	50	534	1150	ND	ug/kg	U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Volatile Organic Compounds

Method: EPA 8260D MED — Sampled: 02/13/2023 09:32

Instrument: NT5 Analyst: PB — Analyzed: 02/15/2023 17:25

Analysis by: Analytical Resources, LLC

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Dichlorodifluoromethane	75-71-8	50	92.6	230	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	50	58.4	230	ND	ug/kg	U
2-Pentanone	107-87-9	50	493	1150	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-124 %*	*109*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*103*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*104*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*102*	*%*	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 02/13/2023 09:32
Instrument: NT3 Analyst: PKC — Analyzed: 02/20/2023 18:04

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 23B0278-01 G
Preparation Batch: BLB0515 — Sample Size: 3.465 g (wet) — Dry Weight:1.51 g
Prepared: 02/20/2023 — Final Volume: 5 mL — % Solids: 43.46

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	23100	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*98.3*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*101*	*%*	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Wet Chemistry

Method: EPA 160.4 — Sampled: 02/13/2023 09:32

Instrument: BAL2 Analyst: UW — Analyzed: 02/14/2023 15:26

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23B0278-01

Preparation Batch: BLB0363 — Sample Size: 5 g (wet) — Dry Weight:2.13 g

Prepared: 02/14/2023 — Final Volume: 5 g — % Solids: 42.64

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Volatile Solids		1	0.01	0.01	9.78	%	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Wet Chemistry

Method: EPA 9060A m — Sampled: 02/13/2023 09:32

Instrument: TOC Cube Analyst: CDE — Analyzed: 02/15/2023 11:47

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: PSEP 1986 (modified) — Extract ID: 23B0278-01 E

Preparation Batch: BLB0342 — Sample Size: 0.5567 g (wet) — Dry Weight:0.24 g

Prepared: 02/14/2023 — Final Volume: 0.5567 mL — % Solids: 42.64

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	3.12	%	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-01-021323

23B0278-01 (Solid)

Wet Chemistry

Method: SM 2540 G-97 — Sampled: 02/13/2023 09:32

Instrument: BAL2 Analyst: UW — Analyzed: 02/14/2023 15:26

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23B0278-01

Preparation Batch: BLB0363 — Sample Size: 5 g (wet) — Dry Weight:2.13 g

Prepared: 02/14/2023 — Final Volume: 5 g — % Solids: 42.64

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	42.64	%	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D MED — Sampled: 02/13/2023 10:38

Instrument: NT5 Analyst: PB — Analyzed: 02/15/2023 17:51

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: No Prep - Volatiles — Extract ID: 23B0278-02 F

Preparation Batch: BLB0398 — Sample Size: 3.396 g (wet) — Dry Weight:1.54 g

Prepared: 02/15/2023 — Final Volume: 5 g — % Solids: 45.21

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Chloromethane	74-87-3	50	84.7	223	ND	ug/kg	U
Vinyl Chloride	75-01-4	50	75.1	223	ND	ug/kg	U
Bromomethane	74-83-9	50	86.9	223	162	ug/kg	J
Chloroethane	75-00-3	50	278	447	ND	ug/kg	U
Trichlorofluoromethane	75-69-4	50	218	447	ND	ug/kg	U
Acrolein	107-02-8	50	391	1120	ND	ug/kg	U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	50	189	447	ND	ug/kg	U
Acetone	67-64-1	50	1420	2230	ND	ug/kg	U
1,1-Dichloroethene	75-35-4	50	82.9	223	ND	ug/kg	U
Iodomethane	74-88-4	50	202	223	ND	ug/kg	U
Methylene Chloride	75-09-2	50	974	1120	ND	ug/kg	U
Acrylonitrile	107-13-1	50	442	1120	ND	ug/kg	U
Carbon Disulfide	75-15-0	50	74.0	223	ND	ug/kg	U
trans-1,2-Dichloroethene	156-60-5	50	117	223	ND	ug/kg	U
Vinyl Acetate	108-05-4	50	727	1120	ND	ug/kg	U
1,1-Dichloroethane	75-34-3	50	63.2	223	ND	ug/kg	U
2-Butanone	78-93-3	50	545	1120	ND	ug/kg	U
2,2-Dichloropropane	594-20-7	50	68.6	223	ND	ug/kg	U
cis-1,2-Dichloroethene	156-59-2	50	57.4	223	ND	ug/kg	U
Chloroform	67-66-3	50	64.3	223	ND	ug/kg	U
Bromochloromethane	74-97-5	50	88.3	223	ND	ug/kg	U
1,1,1-Trichloroethane	71-55-6	50	134	223	ND	ug/kg	U
1,1-Dichloropropene	563-58-6	50	63.0	223	ND	ug/kg	U
Carbon tetrachloride	56-23-5	50	69.7	223	ND	ug/kg	U
1,2-Dichloroethane	107-06-2	50	52.3	223	ND	ug/kg	U
Benzene	71-43-2	50	36.9	223	ND	ug/kg	U
Trichloroethene	79-01-6	50	57.0	223	ND	ug/kg	U
1,2-Dichloropropane	78-87-5	50	74.2	223	ND	ug/kg	U
Bromodichloromethane	75-27-4	50	57.4	223	ND	ug/kg	U
Dibromomethane	74-95-3	50	79.5	223	ND	ug/kg	U
2-Chloroethyl vinyl ether	110-75-8	50	674	1120	ND	ug/kg	U
4-Methyl-2-Pentanone	108-10-1	50	305	1120	ND	ug/kg	U
cis-1,3-Dichloropropene	10061-01-5	50	58.5	223	ND	ug/kg	U
Toluene	108-88-3	50	55.2	223	ND	ug/kg	U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D MED — Sampled: 02/13/2023 10:38

Instrument: NT5 Analyst: PB — Analyzed: 02/15/2023 17:51

Analysis by: Analytical Resources, LLC

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
trans-1,3-Dichloropropene	10061-02-6	50	91.6	223	ND	ug/kg	U
2-Hexanone	591-78-6	50	284	1120	ND	ug/kg	U
1,1,2-Trichloroethane	79-00-5	50	59.9	223	ND	ug/kg	U
1,3-Dichloropropane	142-28-9	50	52.3	223	ND	ug/kg	U
Tetrachloroethene	127-18-4	50	44.2	223	ND	ug/kg	U
Dibromochloromethane	124-48-1	50	59.7	223	ND	ug/kg	U
1,2-Dibromoethane	106-93-4	50	68.8	223	ND	ug/kg	U
Chlorobenzene	108-90-7	50	46.2	223	ND	ug/kg	U
Ethylbenzene	100-41-4	50	50.7	223	ND	ug/kg	U
1,1,1,2-Tetrachloroethane	630-20-6	50	79.1	223	ND	ug/kg	U
m,p-Xylene	179601-23-1	50	110	447	ND	ug/kg	U
o-Xylene	95-47-6	50	53.4	223	ND	ug/kg	U
Xylenes, total	1330-20-7	50	156	447	ND	ug/kg	U
Styrene	100-42-5	50	55.0	223	ND	ug/kg	U
Bromoform	75-25-2	50	103	223	ND	ug/kg	U
1,1,2,2-Tetrachloroethane	79-34-5	50	61.2	223	ND	ug/kg	U
1,2,3-Trichloropropane	96-18-4	50	335	447	ND	ug/kg	U
trans-1,4-Dichloro 2-Butene	110-57-6	50	615	1120	ND	ug/kg	U
n-Propylbenzene	103-65-1	50	52.7	223	ND	ug/kg	U
Bromobenzene	108-86-1	50	55.2	223	ND	ug/kg	U
Isopropyl Benzene	98-82-8	50	58.5	223	ND	ug/kg	U
2-Chlorotoluene	95-49-8	50	48.3	223	ND	ug/kg	U
4-Chlorotoluene	106-43-4	50	65.2	223	ND	ug/kg	U
t-Butylbenzene	98-06-6	50	56.1	223	ND	ug/kg	U
1,3,5-Trimethylbenzene	108-67-8	50	56.5	223	ND	ug/kg	U
1,2,4-Trimethylbenzene	95-63-6	50	59.2	223	ND	ug/kg	U
s-Butylbenzene	135-98-8	50	53.8	223	ND	ug/kg	U
4-Isopropyl Toluene	99-87-6	50	64.8	223	ND	ug/kg	U
1,3-Dichlorobenzene	541-73-1	50	54.5	223	ND	ug/kg	U
1,4-Dichlorobenzene	106-46-7	50	96.3	223	ND	ug/kg	U
n-Butylbenzene	104-51-8	50	62.6	223	ND	ug/kg	U
1,2-Dichlorobenzene	95-50-1	50	146	223	ND	ug/kg	U
1,2-Dibromo-3-Chloropropane	96-12-8	50	527	1120	ND	ug/kg	U
1,2,4-Trichlorobenzene	120-82-1	50	406	1120	ND	ug/kg	U
Hexachloro-1,3-Butadiene	87-68-3	50	402	1120	ND	ug/kg	U
Naphthalene	91-20-3	50	550	1120	ND	ug/kg	U
1,2,3-Trichlorobenzene	87-61-6	50	519	1120	ND	ug/kg	U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Volatile Organic Compounds

Method: EPA 8260D MED — Sampled: 02/13/2023 10:38

Instrument: NT5 Analyst: PB — Analyzed: 02/15/2023 17:51

Analysis by: Analytical Resources, LLC

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Dichlorodifluoromethane	75-71-8	50	90.0	223	ND	ug/kg	U
Methyl tert-butyl Ether	1634-04-4	50	56.8	223	ND	ug/kg	U
2-Pentanone	107-87-9	50	480	1120	ND	ug/kg	U
Surrogate: 1,2-Dichloroethane-d4				*80-124 %*	*109*	*%*	
Surrogate: Toluene-d8				*80-120 %*	*104*	*%*	
Surrogate: 4-Bromofluorobenzene				*80-120 %*	*102*	*%*	
Surrogate: 1,2-Dichlorobenzene-d4				*80-120 %*	*101*	*%*	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Volatile Organic Compounds

Method: NWTPHg — Sampled: 02/13/2023 10:38

Instrument: NT3 Analyst: PKC — Analyzed: 02/20/2023 18:26

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: EPA 5035 (Methanol Extraction) — Extract ID: 23B0278-02 G

Preparation Batch: BLB0515 — Sample Size: 3.641 g (wet) — Dry Weight:1.65 g

Prepared: 02/20/2023 — Final Volume: 5 mL — % Solids: 45.21

Analyte	CAS Number	Dilution	Reporting Limit	Result	Units	Notes
Gasoline Range Organics (Tol-Nap)	GRO	50	21200	ND	ug/kg	U
Surrogate: Toluene-d8			*80-120 %*	*99.1*	*%*	
Surrogate: 4-Bromofluorobenzene			*78-123 %*	*97.8*	*%*	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Wet Chemistry

Method: EPA 160.4 — Sampled: 02/13/2023 10:38

Instrument: BAL2 Analyst: UW — Analyzed: 02/14/2023 15:26

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23B0278-02

Preparation Batch: BLB0363 — Sample Size: 5 g (wet) — Dry Weight:2.14 g

Prepared: 02/14/2023 — Final Volume: 5 g — % Solids: 42.87

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Volatile Solids		1	0.01	0.01	9.15	%	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Wet Chemistry

Method: EPA 9060A m — Sampled: 02/13/2023 10:38

Instrument: TOC Cube Analyst: CDE — Analyzed: 02/15/2023 12:17

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: PSEP 1986 (modified) — Extract ID: 23B0278-02 E

Preparation Batch: BLB0342 — Sample Size: 0.6568 g (wet) — Dry Weight:0.28 g

Prepared: 02/14/2023 — Final Volume: 0.6568 mL — % Solids: 42.87

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Organic Carbon		1	0.02	0.02	2.89	%	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

CPMD-SS-02-021323

23B0278-02 (Solid)

Wet Chemistry

Method: SM 2540 G-97 — Sampled: 02/13/2023 10:38

Instrument: BAL2 Analyst: UW — Analyzed: 02/14/2023 15:26

Analysis by: Analytical Resources, LLC

Sample Preparation: Preparation Method: No Prep Wet Chem — Extract ID: 23B0278-02

Preparation Batch: BLB0363 — Sample Size: 5 g (wet) — Dry Weight:2.14 g

Prepared: 02/14/2023 — Final Volume: 5 g — % Solids: 42.87

Analyte	CAS Number	Dilution	Detection Limit	Reporting Limit	Result	Units	Notes
Total Solids		1	0.04	0.04	42.87	%	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLB0398-BLK1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 14:34							
Chloromethane	ND	19.0	50.0	ug/kg							U
Vinyl Chloride	ND	16.8	50.0	ug/kg							U
Bromomethane	29.7	19.5	50.0	ug/kg							J
Chloroethane	ND	62.2	100	ug/kg							U
Trichlorofluoromethane	ND	48.8	100	ug/kg							U
Acrolein	ND	87.6	250	ug/kg							U
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	42.4	100	ug/kg							U
Acetone	ND	317	500	ug/kg							U
1,1-Dichloroethene	ND	18.6	50.0	ug/kg							U
Iodomethane	ND	45.3	50.0	ug/kg							U
Methylene Chloride	ND	218	250	ug/kg							U
Acrylonitrile	ND	98.9	250	ug/kg							U
Carbon Disulfide	ND	16.6	50.0	ug/kg							U
trans-1,2-Dichloroethene	ND	26.3	50.0	ug/kg							U
Vinyl Acetate	ND	163	250	ug/kg							U
1,1-Dichloroethane	ND	14.2	50.0	ug/kg							U
2-Butanone	ND	122	250	ug/kg							U
2,2-Dichloropropane	ND	15.4	50.0	ug/kg							U
cis-1,2-Dichloroethene	ND	12.9	50.0	ug/kg							U
Chloroform	ND	14.4	50.0	ug/kg							U
Bromochloromethane	ND	19.8	50.0	ug/kg							U
1,1,1-Trichloroethane	ND	29.9	50.0	ug/kg							U
1,1-Dichloropropene	ND	14.1	50.0	ug/kg							U
Carbon tetrachloride	ND	15.6	50.0	ug/kg							U
1,2-Dichloroethane	ND	11.7	50.0	ug/kg							U
Benzene	ND	8.25	50.0	ug/kg							U
Trichloroethene	ND	12.8	50.0	ug/kg							U
1,2-Dichloropropane	ND	16.6	50.0	ug/kg							U
Bromodichloromethane	ND	12.9	50.0	ug/kg							U
Dibromomethane	ND	17.8	50.0	ug/kg							U
2-Chloroethyl vinyl ether	ND	151	250	ug/kg							U
4-Methyl-2-Pentanone	ND	68.3	250	ug/kg							U
cis-1,3-Dichloropropene	ND	13.1	50.0	ug/kg							U
Toluene	ND	12.4	50.0	ug/kg							U
trans-1,3-Dichloropropene	ND	20.5	50.0	ug/kg							U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLB0398-BLK1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 14:34							
2-Hexanone	ND	63.6	250	ug/kg							U
1,1,2-Trichloroethane	ND	13.4	50.0	ug/kg							U
1,3-Dichloropropane	ND	11.7	50.0	ug/kg							U
Tetrachloroethene	ND	9.90	50.0	ug/kg							U
Dibromochloromethane	ND	13.4	50.0	ug/kg							U
1,2-Dibromoethane	ND	15.4	50.0	ug/kg							U
Chlorobenzene	ND	10.4	50.0	ug/kg							U
Ethylbenzene	ND	11.4	50.0	ug/kg							U
1,1,1,2-Tetrachloroethane	ND	17.7	50.0	ug/kg							U
m,p-Xylene	ND	24.7	100	ug/kg							U
o-Xylene	ND	12.0	50.0	ug/kg							U
Xylenes, total	ND	34.9	100	ug/kg							U
Styrene	ND	12.3	50.0	ug/kg							U
Bromoform	ND	23.1	50.0	ug/kg							U
1,1,2,2-Tetrachloroethane	ND	13.7	50.0	ug/kg							U
1,2,3-Trichloropropane	ND	74.9	100	ug/kg							U
trans-1,4-Dichloro 2-Butene	ND	138	250	ug/kg							U
n-Propylbenzene	ND	11.8	50.0	ug/kg							U
Bromobenzene	ND	12.4	50.0	ug/kg							U
Isopropyl Benzene	ND	13.1	50.0	ug/kg							U
2-Chlorotoluene	ND	10.8	50.0	ug/kg							U
4-Chlorotoluene	ND	14.6	50.0	ug/kg							U
t-Butylbenzene	ND	12.6	50.0	ug/kg							U
1,3,5-Trimethylbenzene	ND	12.7	50.0	ug/kg							U
1,2,4-Trimethylbenzene	ND	13.3	50.0	ug/kg							U
s-Butylbenzene	ND	12.1	50.0	ug/kg							U
4-Isopropyl Toluene	ND	14.5	50.0	ug/kg							U
1,3-Dichlorobenzene	ND	12.2	50.0	ug/kg							U
1,4-Dichlorobenzene	ND	21.6	50.0	ug/kg							U
n-Butylbenzene	ND	14.0	50.0	ug/kg							U
1,2-Dichlorobenzene	ND	32.7	50.0	ug/kg							U
1,2-Dibromo-3-Chloropropane	ND	118	250	ug/kg							U
1,2,4-Trichlorobenzene	ND	90.9	250	ug/kg							U
Hexachloro-1,3-Butadiene	ND	90.0	250	ug/kg							U
Naphthalene	ND	123	250	ug/kg							U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLB0398-BLK1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 14:34							
1,2,3-Trichlorobenzene	ND	116	250	ug/kg							U
Dichlorodifluoromethane	ND	20.2	50.0	ug/kg							U
Methyl tert-butyl Ether	ND	12.7	50.0	ug/kg							U
2-Pentanone	ND	107	250	ug/kg							U
Surrogate: 1,2-Dichloroethane-d4	53.1			ug/kg	*50.0*		*106*	*80-124*			
Surrogate: Toluene-d8	50.2			ug/kg	*50.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	50.0			ug/kg	*50.0*		*99.9*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.7			ug/kg	*50.0*		*101*	*80-120*			
LCS (BLB0398-BS1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 13:03							
Chloromethane	2640			ug/kg	2500		106	42-153			
Vinyl Chloride	3010			ug/kg	2500		120	71-135			
Bromomethane	2640			ug/kg	2500		106	41-147			
Chloroethane	2950			ug/kg	2500		118	58-150			
Trichlorofluoromethane	3270			ug/kg	2500		131	57-157			Q
Acrolein	13900			ug/kg	12500		111	45-149			
1,1,2-Trichloro-1,2,2-Trifluoroethane	3110			ug/kg	2500		124	70-133			Q
Acetone	12500			ug/kg	12500		100	45-147			
1,1-Dichloroethene	3010			ug/kg	2500		120	67-132			
Iodomethane	2860			ug/kg	2500		114	42-187			
Methylene Chloride	2820			ug/kg	2500		113	53-169			
Acrylonitrile	2630			ug/kg	2500		105	63-133			
Carbon Disulfide	3080			ug/kg	2500		123	62-140			Q
trans-1,2-Dichloroethene	2960			ug/kg	2500		118	71-136			
Vinyl Acetate	2790			ug/kg	2500		112	49-149			
1,1-Dichloroethane	2890			ug/kg	2500		116	71-127			
2-Butanone	14100			ug/kg	12500		113	65-136			
2,2-Dichloropropane	2950			ug/kg	2500		118	73-129			
cis-1,2-Dichloroethene	2930			ug/kg	2500		117	77-121			
Chloroform	2850			ug/kg	2500		114	76-123			
Bromochloromethane	2820			ug/kg	2500		113	78-120			
1,1,1-Trichloroethane	2970			ug/kg	2500		119	76-125			
1,1-Dichloropropene	2790			ug/kg	2500		112	66-136			
Carbon tetrachloride	2690			ug/kg	2500		107	73-127			
1,2-Dichloroethane	2470			ug/kg	2500		99.0	75-120			

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLB0398-BS1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 13:03							
Benzene	2700			ug/kg	2500		108	80-120			
Trichloroethene	2730			ug/kg	2500		109	77-120			
1,2-Dichloropropane	2580			ug/kg	2500		103	78-120			
Bromodichloromethane	2550			ug/kg	2500		102	73-128			
Dibromomethane	2550			ug/kg	2500		102	78-120			
2-Chloroethyl vinyl ether	2660			ug/kg	2500		106	56-120			
4-Methyl-2-Pentanone	12800			ug/kg	12500		102	67-120			
cis-1,3-Dichloropropene	2630			ug/kg	2500		105	80-120			
Toluene	2620			ug/kg	2500		105	77-120			
trans-1,3-Dichloropropene	2610			ug/kg	2500		104	77-120			
2-Hexanone	12400			ug/kg	12500		99.2	73-122			
1,1,2-Trichloroethane	2550			ug/kg	2500		102	75-120			
1,3-Dichloropropane	2540			ug/kg	2500		102	73-120			
Tetrachloroethene	2710			ug/kg	2500		109	77-124			
Dibromochloromethane	2490			ug/kg	2500		99.7	75-120			
1,2-Dibromoethane	2530			ug/kg	2500		101	79-120			
Chlorobenzene	2550			ug/kg	2500		102	77-120			
Ethylbenzene	2650			ug/kg	2500		106	79-122			
1,1,1,2-Tetrachloroethane	2500			ug/kg	2500		99.8	78-120			
m,p-Xylene	5330			ug/kg	5000		107	77-121			
o-Xylene	2670			ug/kg	2500		107	79-120			
Xylenes, total	8000			ug/kg	7500		107	80-120			
Styrene	2670			ug/kg	2500		107	77-124			
Bromoform	2480			ug/kg	2500		99.3	71-120			
1,1,2,2-Tetrachloroethane	2390			ug/kg	2500		95.7	70-120			
1,2,3-Trichloropropane	2360			ug/kg	2500		94.5	67-120			
trans-1,4-Dichloro 2-Butene	2300			ug/kg	2500		92.2	66-120			
n-Propylbenzene	2640			ug/kg	2500		106	80-125			
Bromobenzene	2470			ug/kg	2500		98.7	76-120			
Isopropyl Benzene	2710			ug/kg	2500		108	74-130			
2-Chlorotoluene	2570			ug/kg	2500		103	77-120			
4-Chlorotoluene	2620			ug/kg	2500		105	77-121			
t-Butylbenzene	2650			ug/kg	2500		106	74-126			
1,3,5-Trimethylbenzene	2640			ug/kg	2500		106	79-124			
1,2,4-Trimethylbenzene	2610			ug/kg	2500		104	79-125			

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS (BLB0398-BS1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 13:03							
s-Butylbenzene	2660			ug/kg	2500		107	80-127			
4-Isopropyl Toluene	2670			ug/kg	2500		107	75-132			
1,3-Dichlorobenzene	2530			ug/kg	2500		101	75-126			
1,4-Dichlorobenzene	2500			ug/kg	2500		99.8	74-124			
n-Butylbenzene	2720			ug/kg	2500		109	75-136			
1,2-Dichlorobenzene	2480			ug/kg	2500		99.1	76-120			
1,2-Dibromo-3-Chloropropane	2360			ug/kg	2500		94.4	60-142			
1,2,4-Trichlorobenzene	2670			ug/kg	2500		107	73-136			
Hexachloro-1,3-Butadiene	2440			ug/kg	2500		97.5	71-133			
Naphthalene	2610			ug/kg	2500		104	63-130			
1,2,3-Trichlorobenzene	2540			ug/kg	2500		101	70-129			
Dichlorodifluoromethane	3030			ug/kg	2500		121	62-143			Q
Methyl tert-butyl Ether	2790			ug/kg	2500		112	68-132			
2-Pentanone	13300			ug/kg	12500		106	63-122			
Surrogate: 1,2-Dichloroethane-d4	53.5			ug/kg	*50.0*		*107*	*80-124*			
Surrogate: Toluene-d8	50.3			ug/kg	*50.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	49.7			ug/kg	*50.0*		*99.5*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.5			ug/kg	*50.0*		*101*	*80-120*			
LCS Dup (BLB0398-BSD1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 14:10							
Chloromethane	2580			ug/kg	2500		103	42-153	2.31	30	
Vinyl Chloride	2930			ug/kg	2500		117	71-135	2.70	30	
Bromomethane	2640			ug/kg	2500		105	41-147	0.06	30	
Chloroethane	2800			ug/kg	2500		112	58-150	5.26	30	
Trichlorofluoromethane	3150			ug/kg	2500		126	57-157	3.56	30	Q
Acrolein	13400			ug/kg	12500		107	45-149	3.76	30	
1,1,2-Trichloro-1,2,2-Trifluoroethane	3080			ug/kg	2500		123	70-133	0.95	30	Q
Acetone	12700			ug/kg	12500		102	45-147	1.56	30	
1,1-Dichloroethene	2920			ug/kg	2500		117	67-132	2.96	30	
Iodomethane	2780			ug/kg	2500		111	42-187	2.83	30	
Methylene Chloride	2790			ug/kg	2500		112	53-169	1.09	30	
Acrylonitrile	2620			ug/kg	2500		105	63-133	0.72	30	
Carbon Disulfide	3000			ug/kg	2500		120	62-140	2.34	30	Q
trans-1,2-Dichloroethene	2880			ug/kg	2500		115	71-136	2.66	30	
Vinyl Acetate	2690			ug/kg	2500		108	49-149	3.69	30	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLB0398-BSD1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 14:10							
1,1-Dichloroethane	2780			ug/kg	2500		111	71-127	4.08	30	
2-Butanone	13800			ug/kg	12500		110	65-136	2.20	30	
2,2-Dichloropropane	2880			ug/kg	2500		115	73-129	2.50	30	
cis-1,2-Dichloroethene	2800			ug/kg	2500		112	77-121	4.55	30	
Chloroform	2740			ug/kg	2500		110	76-123	4.01	30	
Bromochloromethane	2720			ug/kg	2500		109	78-120	3.74	30	
1,1,1-Trichloroethane	2830			ug/kg	2500		113	76-125	4.89	30	
1,1-Dichloropropene	2720			ug/kg	2500		109	66-136	2.50	30	
Carbon tetrachloride	2570			ug/kg	2500		103	73-127	4.50	30	
1,2-Dichloroethane	2400			ug/kg	2500		95.8	75-120	3.21	30	
Benzene	2590			ug/kg	2500		104	80-120	4.00	30	
Trichloroethene	2630			ug/kg	2500		105	77-120	3.71	30	
1,2-Dichloropropane	2480			ug/kg	2500		99.1	78-120	4.16	30	
Bromodichloromethane	2470			ug/kg	2500		98.8	73-128	3.32	30	
Dibromomethane	2460			ug/kg	2500		98.4	78-120	3.73	30	
2-Chloroethyl vinyl ether	2670			ug/kg	2500		107	56-120	0.33	30	
4-Methyl-2-Pentanone	12700			ug/kg	12500		101	67-120	0.68	30	
cis-1,3-Dichloropropene	2570			ug/kg	2500		103	80-120	2.41	30	
Toluene	2530			ug/kg	2500		101	77-120	3.64	30	
trans-1,3-Dichloropropene	2490			ug/kg	2500		99.5	77-120	4.58	30	
2-Hexanone	12300			ug/kg	12500		98.2	73-122	1.05	30	
1,1,2-Trichloroethane	2420			ug/kg	2500		96.8	75-120	5.03	30	
1,3-Dichloropropane	2440			ug/kg	2500		97.5	73-120	4.17	30	
Tetrachloroethene	2670			ug/kg	2500		107	77-124	1.81	30	
Dibromochloromethane	2420			ug/kg	2500		96.9	75-120	2.79	30	
1,2-Dibromoethane	2450			ug/kg	2500		98.1	79-120	3.24	30	
Chlorobenzene	2490			ug/kg	2500		99.4	77-120	2.74	30	
Ethylbenzene	2560			ug/kg	2500		102	79-122	3.57	30	
1,1,1,2-Tetrachloroethane	2410			ug/kg	2500		96.4	78-120	3.48	30	
m,p-Xylene	5190			ug/kg	5000		104	77-121	2.72	30	
o-Xylene	2570			ug/kg	2500		103	79-120	3.72	30	
Xylenes, total	7760			ug/kg	7500		103	80-120	3.05	30	
Styrene	2610			ug/kg	2500		104	77-124	2.45	30	
Bromoform	2430			ug/kg	2500		97.3	71-120	2.00	30	
1,1,2,2-Tetrachloroethane	2320			ug/kg	2500		92.9	70-120	2.92	30	

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0398 - EPA 8260D MED

Instrument: NT5 Analyst: PB

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
LCS Dup (BLB0398-BSD1)				Prepared: 15-Feb-2023 Analyzed: 15-Feb-2023 14:10							
1,2,3-Trichloropropane	2320			ug/kg	2500		92.9	67-120	1.70	30	
trans-1,4-Dichloro 2-Butene	2290			ug/kg	2500		91.6	66-120	0.65	30	
n-Propylbenzene	2570			ug/kg	2500		103	80-125	2.74	30	
Bromobenzene	2380			ug/kg	2500		95.1	76-120	3.69	30	
Isopropyl Benzene	2600			ug/kg	2500		104	74-130	4.10	30	
2-Chlorotoluene	2500			ug/kg	2500		99.9	77-120	3.03	30	
4-Chlorotoluene	2540			ug/kg	2500		102	77-121	3.21	30	
t-Butylbenzene	2560			ug/kg	2500		102	74-126	3.61	30	
1,3,5-Trimethylbenzene	2560			ug/kg	2500		102	79-124	3.16	30	
1,2,4-Trimethylbenzene	2540			ug/kg	2500		102	79-125	2.74	30	
s-Butylbenzene	2580			ug/kg	2500		103	80-127	3.13	30	
4-Isopropyl Toluene	2650			ug/kg	2500		106	75-132	0.97	30	
1,3-Dichlorobenzene	2450			ug/kg	2500		98.2	75-126	3.14	30	
1,4-Dichlorobenzene	2450			ug/kg	2500		98.1	74-124	1.73	30	
n-Butylbenzene	2710			ug/kg	2500		108	75-136	0.45	30	
1,2-Dichlorobenzene	2410			ug/kg	2500		96.4	76-120	2.78	30	
1,2-Dibromo-3-Chloropropane	2340			ug/kg	2500		93.4	60-142	1.00	30	
1,2,4-Trichlorobenzene	2680			ug/kg	2500		107	73-136	0.40	30	
Hexachloro-1,3-Butadiene	2640			ug/kg	2500		106	71-133	8.01	30	
Naphthalene	2580			ug/kg	2500		103	63-130	1.01	30	
1,2,3-Trichlorobenzene	2530			ug/kg	2500		101	70-129	0.13	30	
Dichlorodifluoromethane	3020			ug/kg	2500		121	62-143	0.20	30	Q
Methyl tert-butyl Ether	2730			ug/kg	2500		109	68-132	2.32	30	
2-Pentanone	12900			ug/kg	12500		103	63-122	3.02	30	
Surrogate: 1,2-Dichloroethane-d4	51.8			ug/kg	*50.0*		*104*	*80-124*			
Surrogate: Toluene-d8	49.5			ug/kg	*50.0*		*99.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	49.6			ug/kg	*50.0*		*99.2*	*80-120*			
Surrogate: 1,2-Dichlorobenzene-d4	50.0			ug/kg	*50.0*		*100*	*80-120*			

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Volatile Organic Compounds - Quality Control

Batch BLB0515 - NWTPHg

Instrument: NT3 Analyst: PKC

QC Sample/Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLB0515-BLK1)				Prepared: 20-Feb-2023	Analyzed: 20-Feb-2023 12:12					
Gasoline Range Organics (Tol-Nap)	ND	5000	ug/kg							U
Surrogate: Toluene-d8	4.94		ug/kg	*5.00*		*98.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	4.97		ug/kg	*5.00*		*99.4*	*78-123*			
LCS (BLB0515-BS1)				Prepared: 20-Feb-2023	Analyzed: 20-Feb-2023 09:46					
Gasoline Range Organics (Tol-Nap)	54900	5000	ug/kg	50000		110	70-121			
Surrogate: Toluene-d8	4.99		ug/kg	*5.00*		*99.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.04		ug/kg	*5.00*		*101*	*78-123*			
LCS Dup (BLB0515-BSD1)				Prepared: 20-Feb-2023	Analyzed: 20-Feb-2023 10:52					
Gasoline Range Organics (Tol-Nap)	52200	5000	ug/kg	50000		104	70-121	5.11	30	
Surrogate: Toluene-d8	4.93		ug/kg	*5.00*		*98.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	5.07		ug/kg	*5.00*		*101*	*78-123*			

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLB0342 - EPA 9060A m

Instrument: TOC Cube Analyst: CDE

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLB0342-BLK1)				Prepared: 14-Feb-2023 Analyzed: 14-Feb-2023 22:09							
Total Organic Carbon	ND	0.02	0.02	%							U
LCS (BLB0342-BS1)				Prepared: 14-Feb-2023 Analyzed: 14-Feb-2023 22:39							
Total Organic Carbon	44.0	0.02	0.02	%	44.4		99.0	80-120			
Reference (BLB0342-SRM1)				Prepared: 14-Feb-2023 Analyzed: 14-Feb-2023 23:09							
Total Organic Carbon	2.93	0.02	0.02	%	2.99		97.9	80-120			

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Analysis by: Analytical Resources, LLC

Wet Chemistry - Quality Control

Batch BLB0363 - EPA 160.4

Instrument: BAL2 Analyst: UW

QC Sample/Analyte	Result	Detection Limit	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (BLB0363-BLK1)				Prepared: 14-Feb-2023 Analyzed: 14-Feb-2023 15:26							
Volatile Solids	ND	0.01	0.01	%							U
Total Solids	ND	0.04	0.04	%							U

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Certified Analyses included in this Report

Analyte	Certifications
EPA 160.4 in Solid	
Volatile Solids	NELAP,DoD-ELAP,WADOE
EPA 8260D MED in Solid	
Chloromethane	DoD-ELAP,WADOE,NELAP,ADEC
Vinyl Chloride	DoD-ELAP,WADOE,NELAP,ADEC
Bromomethane	DoD-ELAP,WADOE,NELAP,ADEC
Chloroethane	DoD-ELAP,WADOE,NELAP,ADEC
Trichlorofluoromethane	DoD-ELAP,WADOE,NELAP,ADEC
Acrolein	DoD-ELAP,WADOE,NELAP
1,1,2-Trichloro-1,2,2-Trifluoroethane	DoD-ELAP,WADOE,NELAP,ADEC
Acetone	DoD-ELAP,WADOE,NELAP
1,1-Dichloroethene	DoD-ELAP,WADOE,NELAP,ADEC
Iodomethane	DoD-ELAP,WADOE,NELAP,ADEC
Methylene Chloride	DoD-ELAP,WADOE,NELAP,ADEC
Acrylonitrile	DoD-ELAP,WADOE,NELAP
Carbon Disulfide	DoD-ELAP,WADOE,NELAP,ADEC
trans-1,2-Dichloroethene	DoD-ELAP,WADOE,NELAP,ADEC
Vinyl Acetate	DoD-ELAP,WADOE,NELAP
1,1-Dichloroethane	DoD-ELAP,WADOE,NELAP,ADEC
2-Butanone	DoD-ELAP,WADOE,NELAP
2,2-Dichloropropane	DoD-ELAP,WADOE,NELAP
cis-1,2-Dichloroethene	DoD-ELAP,WADOE,NELAP,ADEC
Chloroform	DoD-ELAP,WADOE,NELAP,ADEC
Bromochloromethane	DoD-ELAP,WADOE,NELAP,ADEC
1,1,1-Trichloroethane	DoD-ELAP,WADOE,NELAP,ADEC
1,1-Dichloropropene	DoD-ELAP,WADOE,NELAP,ADEC
Carbon tetrachloride	DoD-ELAP,WADOE,NELAP,ADEC
1,2-Dichloroethane	DoD-ELAP,WADOE,NELAP,ADEC
Benzene	DoD-ELAP,WADOE,NELAP,ADEC
Trichloroethene	DoD-ELAP,WADOE,NELAP,ADEC
1,2-Dichloropropane	DoD-ELAP,WADOE,NELAP,ADEC
Bromodichloromethane	DoD-ELAP,WADOE,NELAP,ADEC
Dibromomethane	DoD-ELAP,WADOE,NELAP,ADEC
2-Chloroethyl vinyl ether	DoD-ELAP
4-Methyl-2-Pentanone	DoD-ELAP,WADOE,NELAP

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

cis-1,3-Dichloropropene	DoD-ELAP,WADOE,NELAP,ADEC
Toluene	DoD-ELAP,WADOE,NELAP,ADEC
trans-1,3-Dichloropropene	DoD-ELAP,WADOE,NELAP,ADEC
2-Hexanone	DoD-ELAP,WADOE,NELAP
1,1,2-Trichloroethane	DoD-ELAP,WADOE,NELAP,ADEC
1,3-Dichloropropane	DoD-ELAP,WADOE,NELAP,ADEC
Tetrachloroethene	DoD-ELAP,WADOE,NELAP,ADEC
Dibromochloromethane	DoD-ELAP,WADOE,NELAP,ADEC
1,2-Dibromoethane	DoD-ELAP,WADOE,NELAP,ADEC
Chlorobenzene	DoD-ELAP,WADOE,NELAP,ADEC
Ethylbenzene	DoD-ELAP,WADOE,NELAP,ADEC
1,1,1,2-Tetrachloroethane	DoD-ELAP,WADOE,NELAP,ADEC
m,p-Xylene	DoD-ELAP,WADOE,NELAP,ADEC
o-Xylene	DoD-ELAP,WADOE,NELAP,ADEC
Styrene	DoD-ELAP,WADOE,NELAP,ADEC
Bromoform	DoD-ELAP,WADOE,NELAP,ADEC
1,1,2,2-Tetrachloroethane	DoD-ELAP,WADOE,NELAP,ADEC
1,2,3-Trichloropropane	DoD-ELAP,WADOE,NELAP,ADEC
trans-1,4-Dichloro 2-Butene	DoD-ELAP,WADOE
n-Propylbenzene	DoD-ELAP,WADOE,NELAP
Bromobenzene	DoD-ELAP,WADOE,NELAP,ADEC
Isopropyl Benzene	DoD-ELAP,WADOE,NELAP,ADEC
2-Chlorotoluene	DoD-ELAP,WADOE,NELAP
4-Chlorotoluene	DoD-ELAP,WADOE,NELAP
t-Butylbenzene	DoD-ELAP,WADOE,NELAP
1,3,5-Trimethylbenzene	DoD-ELAP,WADOE,NELAP
1,2,4-Trimethylbenzene	DoD-ELAP,WADOE,NELAP
s-Butylbenzene	DoD-ELAP,WADOE,NELAP
4-Isopropyl Toluene	DoD-ELAP,WADOE,NELAP
1,3-Dichlorobenzene	DoD-ELAP,WADOE,NELAP
1,4-Dichlorobenzene	DoD-ELAP,WADOE,NELAP
n-Butylbenzene	DoD-ELAP,WADOE,NELAP
1,2-Dichlorobenzene	DoD-ELAP,WADOE,NELAP
1,2-Dibromo-3-Chloropropane	DoD-ELAP,WADOE,NELAP,ADEC
1,2,4-Trichlorobenzene	DoD-ELAP,WADOE,NELAP,ADEC
Hexachloro-1,3-Butadiene	DoD-ELAP,WADOE,NELAP,ADEC
Naphthalene	DoD-ELAP,WADOE,NELAP
1,2,3-Trichlorobenzene	DoD-ELAP,WADOE,NELAP,ADEC
Dichlorodifluoromethane	DoD-ELAP,WADOE,NELAP,ADEC

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Methyl tert-butyl Ether	DoD-ELAP,WADOE,NELAP
n-Hexane	WADOE
EPA 9060A m in Solid	
Total Organic Carbon	WADOE
NWTPHg in Solid	
Gasoline Range Organics (Tol-Nap)	DoD-ELAP
Gasoline Range Organics (2MP-TMB)	DoD-ELAP
Gasoline Range Organics (Tol-C12)	DoD-ELAP
Gasoline Range Organics (C6-C10)	DoD-ELAP
Gasoline Range Organics (C5-C12)	DoD-ELAP
4-Bromofluorobenzene (field spiked)	DoD-ELAP

Code	Description	Number	Expires
ADEC	Alaska Dept of Environmental Conservation	17-015	03/28/2023
DoD-ELAP	DoD-Environmental Laboratory Accreditation Program, PJLA Testing	66169	02/28/2023
NELAP	ORELAP - Oregon Laboratory Accreditation Program	WA100006-012	05/12/2023
WADOE	WA Dept of Ecology	C558	06/30/2023
WA-DW	Ecology - Drinking Water	C558	06/30/2023

Anchor QEA, LLC	Project: CalPortland Maintenance Dredge 2023	
1201 3rd Ave, Suite 2600	Project Number: 200217-01.01	**Reported:**
Seattle WA, 98101	Project Manager: Jennifer Marsalla	21-Feb-2023 18:20

Notes and Definitions

*	Flagged value is not within established control limits.
J	Estimated concentration value detected below the reporting limit.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
[2C]	Indicates this result was quantified on the second column on a dual column analysis.

APPENDIX II DEEP SEEP PHOTOLOG

Photo 1: Deep seep observed by ERM within the Embayment in March 2011 during low tide conditions

Photo 2: Deep seep observed by ERM within the Embayment in March 2011 during low tide conditions

Photo 3: Deep seep location within the Embayment

Photo 4: Deep seep location within the Embayment

ERM HAS OVER 160 OFFICES ACROSS THE FOLLOWING COUNTRIES AND TERRITORIES WORLDWIDE

Argentina
Australia
Belgium
Brazil
Canada
China
Colombia
France
Germany
Ghana
Guyana
Hong Kong
India
Indonesia
Ireland
Italy
Japan
Kazakhstan
Kenya
Malaysia
Mexico
Mozambique
The Netherlands
New Zealand
Peru
Poland
Portugal
Romania
Senegal
Singapore
South Africa
South Korea
Spain
Switzerland
Taiwan
Tanzania
Thailand
UAE
UK
US
Vietnam

ERM's Seattle Office
1201 3rd Avenue
Floor 22
Seattle, WA 98101

T: +1 425 462 8591
F: +1 425 455 3573

www.erm.com