Hamilton Street Bridge Site
Semiannual Monitoring Report
September 6, 2017 Sampling Event
Spokane, Washington

December 19, 2017

Prepared for

Avista Corporation
Spokane, Washington

LANDAU ASSOCIATES

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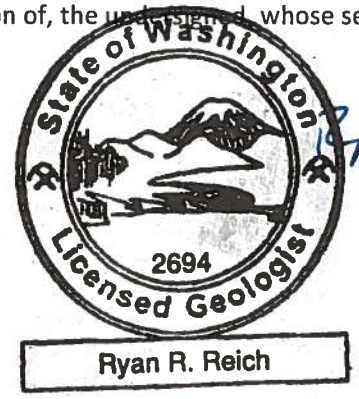

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LIST OF ABBREVIATIONS AND ACRONYMS

Avista	Avista Corporation
BNSF	BNSF Railway Company
CMP	compliance monitoring plan
cPAH	carcinogenic PAHs
Ecology	Washington State Department of Ecology
EPA	US Environmental Protection Agency
ft	feet
HSB	Hamilton Street Bridge
LAI	Landau Associates, Inc.
mg/L	milligrams per liter
MSL	mean sea level
PAH	polycyclic aromatic hydrocarbons
RL	reporting limit
WAD	weak acid dissociable

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1.0 INTRODUCTION

This semiannual compliance monitoring report has been prepared on behalf of Avista Corporation (Avista) and BNSF Railway Company (BNSF) by Landau Associates, Inc. (LAI) for the third quarter 2017 compliance monitoring event at the Hamilton Street Bridge (HSB) Site (site) in Spokane, Washington. Compliance monitoring activities completed during this reporting period included depth-to-groundwater measurements, groundwater sampling, laboratory analysis of groundwater samples, and river stage measurement.

2.0 MONITORING PROGRAM AND WELL LOCATIONS

In accordance with the site Compliance Monitoring Plan (CMP) (LAI 2003), water level monitoring and groundwater sampling are completed semiannually in the first and third quarters of the calendar year.

In 2010 and 2015, the Washington State Department of Ecology (Ecology) completed 5-year Periodic Reviews of site conditions in accordance with WAC 173-340-420(2) (Ecology 2010; Ecology 2015). In the conclusions presented in the 2010 Review, Ecology recommended that groundwater monitoring at the site include analysis for both total and dissolved arsenic. In a comment letter dated December 1, 2010, Avista agreed to add analysis for dissolved arsenic in future monitoring events (Avista 2010).

On September 6, 2017, depth-to-groundwater measurements and groundwater samples were collected from selected monitoring wells at the site, and the river stage level was recorded from a fixed surveyed reference point established on a pier of the James A. Keefe Bridge. A vicinity map showing the location of the site is presented on Figure 1, and a site map showing monitoring well locations and other site features is presented on Figure 2.

2.1 Investigations Methods

Depth to groundwater was measured at selected shallow and deep monitoring wells in accordance with the CMP. Water levels were measured to the nearest 0.01 foot (ft) from the survey mark on the top of PVC casing at each well using an electronic water level indicator and recorded on a field data sheet. Depth-to-groundwater data was then combined with well elevation data to determine groundwater elevations in each well.

In accordance with the CMP, groundwater samples are collected semiannually from monitoring wells MW02-20, MW02-40, MW04-20, MW07-90, and ATC7-20 for chemical analysis. Groundwater samples were collected from monitoring wells MW02-20, MW02-40, and MW04-20 on March 23, 2017 and from MW07-90 and ATC7-20 on March 24, 2017. One duplicate sample (MW20-60) was also collected from MW07-90.

Prior to sampling, each monitoring well was purged of three casing volumes of water using a clean purge pump or peristaltic pump and dedicated polyethylene tubing. Non-disposable monitoring and sampling equipment was decontaminated prior to use in each well. Each casing volume removed during purging was field tested for pH, temperature, conductivity, and turbidity. The field measurements were recorded on groundwater sampling data sheets.

Groundwater samples were collected in containers supplied by the analytical laboratory, and each sample container was labeled, logged on a chain-of-custody report, and placed in a chilled cooler for transport to the laboratory. The chain-of-custody reports are presented in Appendix A.

2.2 Laboratory Analysis

Groundwater samples were submitted to TestAmerica Analytical Laboratory in Spokane, Washington for chemical analysis. All samples were analyzed for polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) by US Environmental Protection Agency (EPA) Method 8270 SIM, total and dissolved arsenic by EPA Method 200.8, mercury by EPA Method 245.1, and weak acid dissociable (WAD) cyanide by EPA Method SM4500-CN.

A data quality evaluation was conducted by LAI on all laboratory analytical data, and analytical results were determined to be acceptable for project use without qualification; all samples were received by the laboratory in good condition and were prepared and analyzed within allowable holding times.

3.0 MONITORING RESULTS

3.1 Groundwater Elevation

Depth-to-groundwater measurements and calculated groundwater elevations are presented in Table 1. Groundwater elevations in site monitoring wells (MW02-20, MW02-40, MW04-20, MW07-90, and ATC7-20) ranged from 1,868.86 ft to 1,870.72 ft on September 6, 2017. Measured groundwater elevations were below the recorded river stage elevation of 1,872.46 ft measured on September 6, 2017.

3.2 Groundwater Analytical Results

The field parameters measured during sampling are presented in Table 2, and the laboratory analytical results are presented in Tables 3 and 4. The analytical results are summarized as follows:

- Total arsenic was detected above the laboratory method reporting limit (RL) in all the samples at concentrations ranging from 0.0016 (MW02-40) to 0.0051 milligrams per liter (ATC7-20; mg/L). None of the concentrations is greater than the site cleanup level of 0.006 mg/L.
- Dissolved arsenic was detected above the RL in all samples at concentrations ranging from 0.0014 to 0.0046 mg/L. None of the concentrations is greater than the site cleanup level (0.006 mg/L).
- PAH and cPAH compounds were not detected above the RL in any of the samples collected.
- WAD cyanide was not detected above the RL in any of the samples.
- Mercury was not detected above the RL in any of the samples.

4.0 SUMMARY

Detections of total and dissolved arsenic were reported in all of the groundwater samples collected on September 6, 2017 at concentrations that are below the site cleanup level. There were no detections of PAH, cPAH, WAD cyanide, or mercury reported.

5.0 USE OF THIS REPORT

This report has been prepared for the exclusive use of Avista Corporation and BNSF Railway for specific application to the Hamilton Street Bridge Site in Spokane, Washington. The reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

6.0 REFERENCES

Avista. 2010. Letter: Hamilton Street Bridge Cleanup Site #3509. From Hank Nelson, Avista Corporation, to Teresita Bala, Washington State Department of Ecology. December 1.

Ecology. 2010. Periodic Review Hamilton Street Bridge Site Facility/Site ID# 84461527 Cleanup Site ID# 3509. Washington State Department of Ecology. August.

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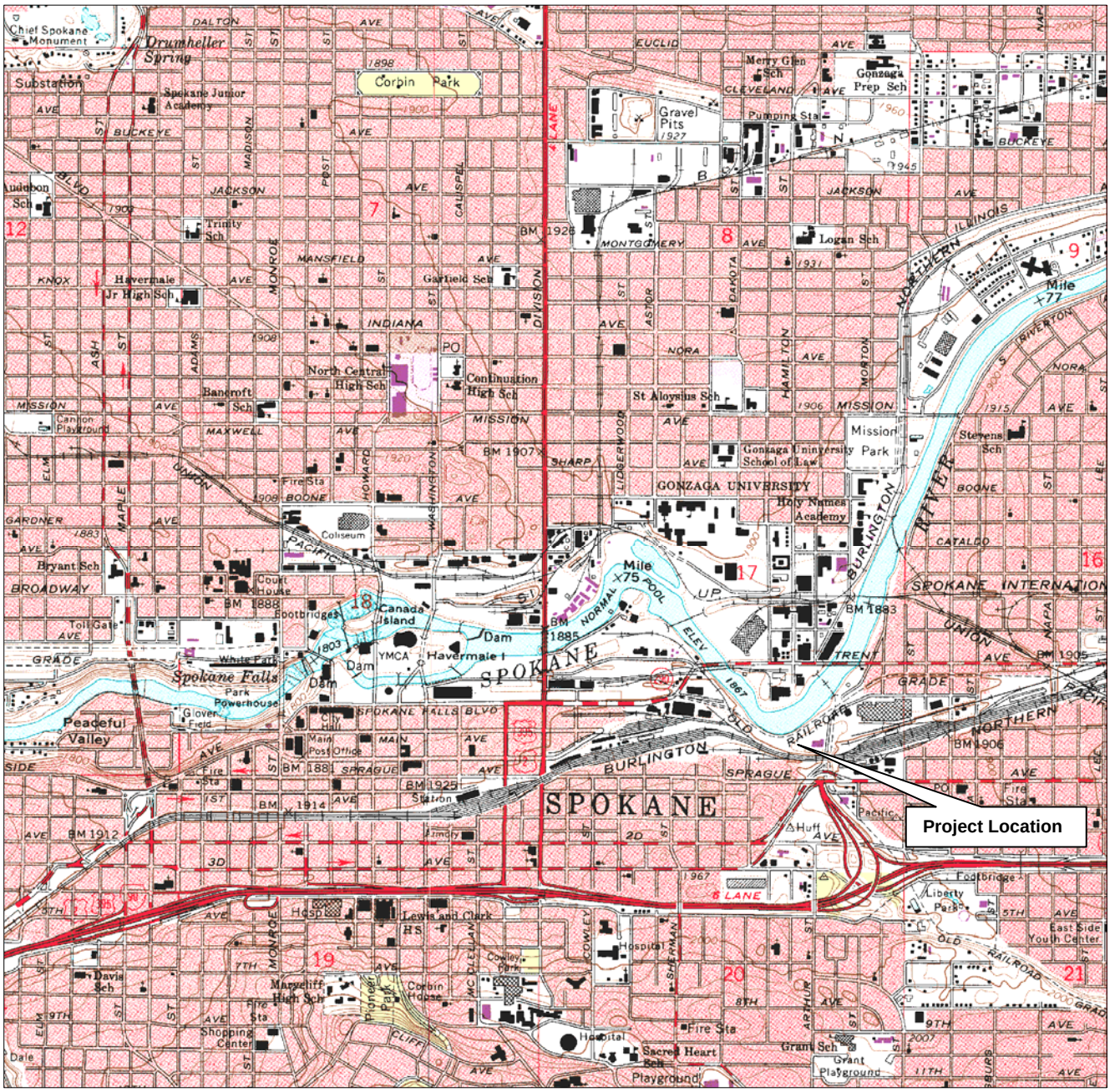
LAI. 2003. Compliance Monitoring Plan, Hamilton Street Bridge Site, Spokane, Washington. Landau Associates, Inc. June.



Source: USGS Spokane NW, WA Quad, 1974; PR 1986. Scale 1:24,000

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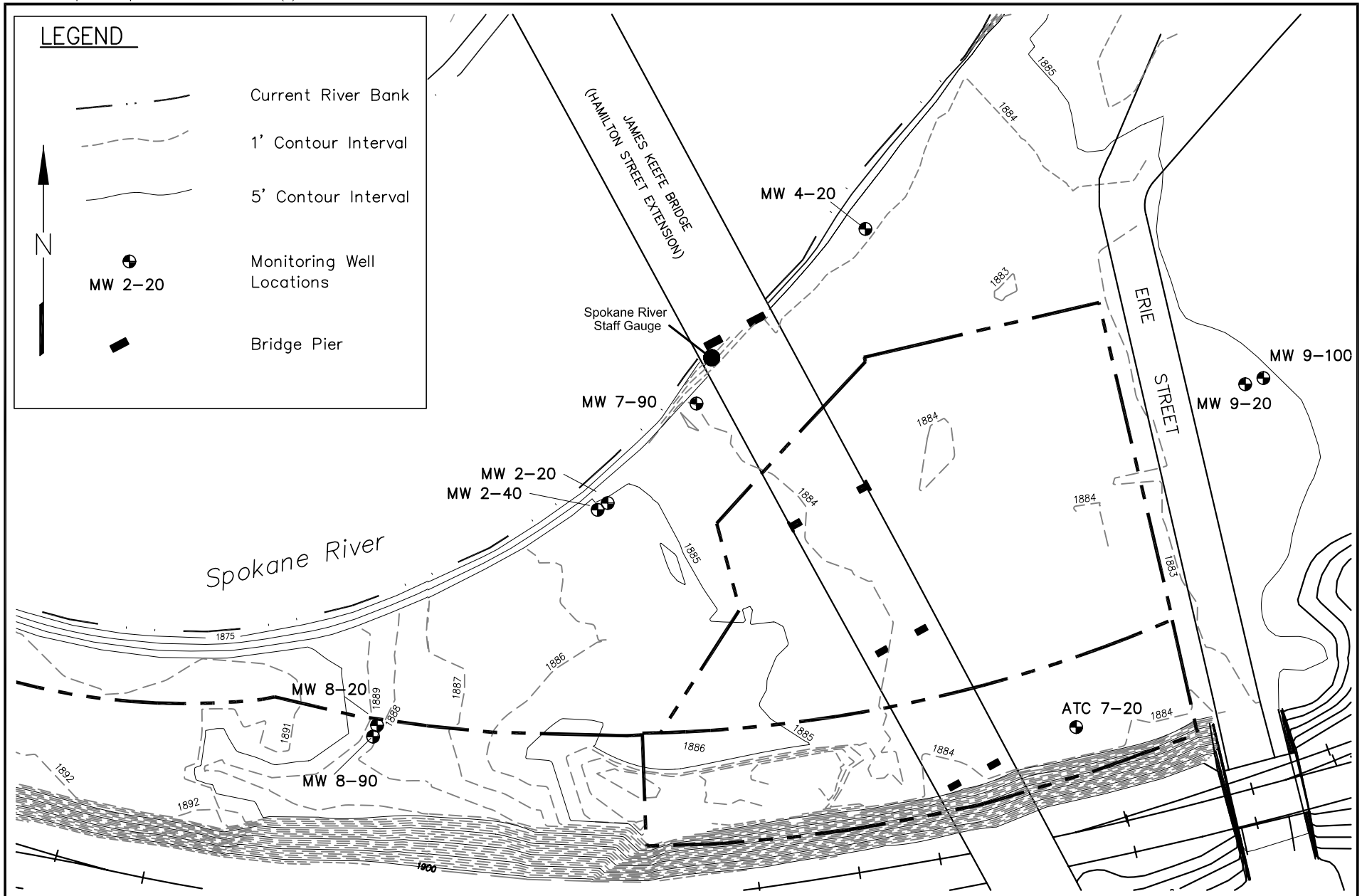
Hamilton Street Bridge Site Spokane, Washington	**Site Location Map**	Figure 1



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Hamilton Street Bridge Site
Spokane, Washington

Compliance Groundwater Monitoring Well Location Map

Figure 2

TABLE 1
GROUNDWATER LEVEL MEASUREMENTS
Hamilton Street Bridge Site
Spokane, Washington

	Shallow Monitoring Wells										Deep Monitoring Wells							
Monitoring Well TOC Elevation (ft)	MW02-20 1,888.42		MW04-20 1,887.44		MW08-20 1,892.06		MW09-20 1,887.59		ATC7-20 1,886.76		MW07-90 1,887.21		MW08-90* 1,895.26		MW09-100 1,887.44		Spokane River 1,875.23	
Date Measured	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation	Depth	Elevation
1/31/2006	16.08	1,872.34	14.57	1,872.87	19.64	1,872.42	12.91	1,874.68	13.68	1,873.08	14.24	1,872.97	19.12	1,876.14	13.63	1,873.81	4.58	1,870.65
8/8/2006	17.92	1,870.50	18.61	1,868.83	21.22	1,870.84	NM	NM	18.09	1,868.67	18.43	1,868.78	23.26	1,872.00	NM	NM	2.68	1,872.55
2/12/2007	17.56	1,870.86	17.01	1,870.43	21.05	1,871.01	15.55	1,872.04	16.33	1,870.43	16.74	1,870.47	21.62	1,873.64	16.24	1,871.20	3.32	1,871.91
9/6/2007	18.03	1,870.39	19.08	1,868.36	21.51	1,870.55	17.85	1,869.74	18.60	1,868.16	18.92	1,868.29	23.76	1,871.50	18.59	1,868.85	2.60	1,872.63
2/13/2008	17.56	1,870.86	17.72	1,869.72	21.03	1,871.03	16.31	1,871.28	17.09	1,869.67	17.48	1,869.73	22.34	1,872.92	17.02	1,870.42	3.15	1,872.08
9/10/2008	17.76	1,870.66	18.16	1,869.28	21.26	1,870.80	16.95	1,870.64	17.73	1,869.03	18.00	1,869.21	22.87	1,872.39	17.70	1,869.74	2.85	1,872.38
2/5/2009	17.55	1,870.87	16.14	1,871.30	20.96	1,871.10	15.27	1,872.32	15.39	1,871.37	15.86	1,871.35	20.86	1,874.40	14.56	1,872.88	3.4	1,871.83
8/19/2009	17.96	1,870.46	18.10	1,869.34	21.40	1,870.66	16.85	1,870.74	17.62	1,869.14	17.91	1,869.30	22.80	1,872.46	17.59	1,869.85	2.73	1,872.50
3/25/2010	17.55	1,870.87	17.42	1,870.02	21.03	1,871.03	15.95	1,871.64	16.73	1,870.03	17.16	1,870.05	22.04	1,873.22	16.66	1,870.78	3.18	1,872.05
8/17/2010	19.92	1868.5	19.25	1,868.19	21.75	1,870.31	17.87	1,869.72	18.67	1,868.09	19.04	1,868.17	23.88	1,871.38	18.59	1,868.85	12.42	1,862.81
2/3/2011	15.14	1873.28	13.05	1,874.39	18.56	1,873.50	11.22	1,876.37	12.15	1,874.61	12.81	1,874.40	17.74	1,877.52	11.94	1,875.50	5.81	1,869.42
9/22/2011	18.54	1869.88	18.26	1,869.18	21.73	1,870.33	16.9	1,870.69	17.71	1,869.05	18.20	1,869.01	22.87	1,869.20	17.61	1,869.83	2.45	1,872.78
2/28/2012	17.39	1871.03	17.38	1,870.06	20.8	1,871.26	15.83	1,871.76	16.51	1,870.25	16.94	1,870.27	21.77	1,870.30	16.48	1,870.96	3.40	1,871.83
9/5/2012	18.09	1870.33	18.13	1,869.31	21.5	1,870.56	16.9	1,870.69	17.70	1,869.06	17.96	1,869.25	22.81	1,869.26	17.62	1,869.82	2.60	1,872.63
2/20/2013	17.38	1871.04	16.48	1,870.96	20.74	1,871.32	15.18	1,872.41	15.82	1,870.94	16.23	1,870.98	21.11	1,870.96	15.70	1,871.74	3.41	1,871.82
9/5/2013	18.07	1870.35	18.59	1,868.85	21.43	1,870.63	17.29	1,870.30	18.08	1,868.68	18.37	1,868.84	23.21	1,868.86	18.00	1,869.44	2.68	1,872.55
3/20/2014	13.08	1875.34	11.72	1,875.72	16.43	1,875.63	10.12	1,877.47	10.98	1,875.78	11.48	1,875.73	16.40	1,875.67	10.81	1,876.63	7.80	1,867.43
9/10/2014	18.00	1870.42	18.35	1,869.09	21.35	1,870.71	17.13	1,870.46	17.90	1,868.86	18.17	1,869.04	23.03	1,869.04	17.81	1,869.63	2.75	1,872.48
3/2/2015	16.23	1872.19	14.13	1,873.31	19.58	1,872.48	12.33	1,875.26	13.20	1,873.56	13.75	1,873.46	18.68	1,873.39	13.01	1,874.43	4.62	1,870.61
9/28/2015	18.08	1870.34	19.02	1,868.42	21.42	1,870.64	17.82	1,869.77	18.60	1,868.16	18.87	1,868.34	23.74	1,868.33	18.52	1,868.92	2.70	1,872.53
3/3/2016	15.63	1872.79	13.96	1,873.48	19.01	1,873.05	12.31	1,875.28	13.16	1,873.60	13.65	1,873.56	18.56	1,873.51	12.44	1,875.00	5.28	1,869.95
9/13/2016	19.34	1869.08	--	--	22.05	1,870.01	17.97	1,869.62	18.76	1,868.00	19.09	1,868.12	27.15	1,868.11	18.67	1,868.77	1.42	1,873.81
3/23/2017	8.03	1880.39	7.30	1,880.14	11.34	1,880.72	5.83	1,881.76	6.64	1,880.12	7.16	1,880.05	15.24	1,880.02	6.52	1,880.92	12.36	1,862.87
9/6/2017	18.01	1870.41	18.30	1,869.14	21.34	1,870.72	17.13	1,870.46	17.90	1,868.86	18.15	1,869.06	26.19	1,869.07	17.84	1,869.60	2.77	1,872.46

Notes:

NM = Not Measured

TOC = Top of Casing

Depth measured in ft below TOC

-- = Dry monitoring well

Survey by USKH, Inc. Elevations based on NGS Station U-25 at USC&GS Brass Cap Bench Mark Located on North Helena Street near railroad crossing, NAVD 88 Datum, Elevation 1909.50 ft.

* Top of casing elevation for monitoirng well MW08-90 resurveyed by Adams & Clark, Inc on November 17, 2017. The well head and monument were adjusted in 2016 to accommodate the construction of MLK Way. The revision applies to depth-to-groundwater measurements recorded after March, 23, 2016.

TABLE 2
SUMMARY OF GROUNDWATER CHEMISTRY DATA
FIELD PARAMETERS
HAMILTON STREET BRIDGE SITE
SPOKANE, WASHINGTON

Location	Date Measured	Field Parameters			
		pH	Temp (°C)	Specific Conductance (µS/cm)	Turbidity (NTU)
MW02-20	9/6/2017	7.56	14.26	252	4.06
MW04-20	9/6/2017	7.70	14.21	257	1.69
MW02-40	9/6/2017	7.40	14.82	249	1.24
MW07-90	9/6/2017	7.93	14.13	269	2.65
ATC7-20	9/6/2017	7.73	13.82	263	2.32

Notes:

Values are final measurements recorded during purging
µS/cm = microSiemens per centimeter
NTU = nephelometric turbidity units
-- = Dry monitoring well

TABLE 3
SUMMARY OF GROUNDWATER CHEMISTRY DATA
ARSENIC, CYANIDE AND MERCURY
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Total Mercury (mg/L)	Total Arsenic (mg/L)	Dissolved Arsenic (mg/L)	WAD Cyanide(a) (mg/L)
MW02-20	2/1/2006	0.0001 U	0.00100 U	--	0.00500 U
	8/9/2006*	0.0001 U	0.00100 U	--	0.0100 U
	2/13/2007*	0.0001 U	0.00108	--	0.0100 U
	9/6/2007*	0.000149 J	0.00105	--	0.0100 U
	2/13/2008*	0.0001 U	0.00140	--	0.0100 U
	9/10/2008	0.000152	0.00957	--	0.00500 U
	2/6/2009	0.0002 U	0.00100 U	--	0.00500 U
	8/20/2009	0.000201	0.00251	--	0.00500 U
	3/26/2010	0.0002 U	0.0001 U	--	0.00500 U
	8/18/2010	0.0002 U	0.001 U	--	0.00500 U
	2/4/2011	0.0002 U	0.001 U	0.001 U	0.00500 U
	9/23/2011	0.0002 U	0.00134	0.00140	0.00500 U
	2/29/2012	0.0002 U	0.0010 U	0.0010 U	0.00500 U
	9/6/2012	0.0002 U	0.0010	0.0010 U	0.00500 U
	2/21/2013	0.0002 U	0.0010 U	0.0010 U	0.0050 U
	9/6/2013	0.0002 U	0.0011	0.0010 U	0.0050 U
	3/21/2014	0.0002 U	0.0010 U	0.0010 U	0.0050 U
	9/10/2014	0.0002 U	0.0013	0.0015	0.0050 U
	3/3/2015	0.0002 U	0.0020 U	0.0020 U	0.010 U
	9/28/2015	0.0002 U	0.0020 U	0.0020 U	0.010 U
	3/4/2016	0.0002 U	0.0020 U	0.0020 U	0.042
	9/13/2016	0.0002 U	0.0011	0.0010 U	0.010 U
	3/23/2017	0.0002 U	0.0010 U	0.0010 U	0.010 U
	9/6/2017	0.0002 U	0.0019	0.0018	0.010 U
MW02-40	2/1/2006	0.0001 U	0.00158	--	0.00500 U
	8/9/2006*	0.0001 U	0.00100 U	--	0.0100 U
	2/13/2007	0.0001 U	0.00155	--	0.0100 U
	9/6/2007	0.000171 J	0.00115	--	0.0100 U
	2/13/2008	0.0001 U	0.00167	--	0.0100 U
	9/10/2008	0.0001 U	0.00145	--	0.00500 U
	2/6/2009	0.0002 U	0.00125	--	0.00500 U
	8/20/2009	0.0002 U	0.00121	--	0.00500 U
	3/26/2010	0.0002 U	0.00113	--	0.00500 U
	8/18/2010	0.0002 U	0.00125	--	0.00500 U
	2/4/2011	0.0002 U	0.00126	0.00115	0.00500 U
	9/23/2011	0.0002 U	0.00140	0.00143	0.00500 U
	2/29/2012	0.0002 U	0.0013	0.0012	0.00500 U
	9/6/2012	0.0002 U	0.0017	0.0016	0.00500 U
	2/21/2013	0.0002 U	0.0023	0.0027	0.0050 U
	9/6/2013	0.0002 U	0.0012	0.0011	0.0050 U
	3/21/2014	0.0002 U	0.0013	0.0014	0.0050 U
	9/10/2014	0.0002 U	0.0016	0.0015	0.0050 U
	3/3/2015	0.0002 U	0.0020 U	0.0020 U	0.010 U
	9/28/2015	0.0002 U	0.0020 U	0.0020 U	0.010 U
	3/3/2016	0.0002 U	0.0020 U	0.0020 U	0.013
	9/13/2016	0.0002 U	0.0013	0.0014	0.010 U
	3/23/2017	0.0002 U	0.0013	0.0014	0.010 U
	9/6/2017	0.0002 U	0.0016	0.0014	0.010 U
Site Cleanup Level (b)		0.0002	0.006	0.006	0.01

TABLE 3
SUMMARY OF GROUNDWATER CHEMISTRY DATA
ARSENIC, CYANIDE AND MERCURY
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Total Mercury (mg/L)	Total Arsenic (mg/L)	Dissolved Arsenic (mg/L)	WAD Cyanide(a) (mg/L)
MW04-20	2/1/2006	0.0001 U	0.00354	--	0.0408
	8/10/2006*	0.0001 U	0.00372	--	0.0100 U
	2/13/2007*	0.0001 U	0.00500	--	0.0100 U
	9/6/2007*	0.000145 J	0.00393	--	0.0100 U
	2/13/2008	0.000152	0.00726	--	0.0100 U
	9/10/2008	0.000114	0.0235	--	0.00500 U
	2/6/2009	0.000118	0.00580	--	0.00850
	8/20/2009	0.0002 U	0.0258	--	0.00500 U
	3/26/2010	0.0002 U	0.00211	--	0.00500 U
	8/18/2010	0.0002 U	0.00528	--	0.00500 U
	2/4/2011	0.0002 U	0.00272	0.00252	0.01920
	9/23/2011	0.0002 U	0.00344	0.00338	0.00500 U
	2/29/2012	0.0002 U	0.0025	0.0026	0.00500 U
	9/6/2012	0.0002 U	0.0034	0.0016	0.00500 U
	2/21/2013	0.0002 U	0.0025	0.0026	0.0053
	9/6/2013	0.0002 U	0.0034	0.0034	0.0050 U
	3/21/2014	0.0002 U	0.0030	0.0029	0.0050 U
	9/10/2014	0.0002 U	0.0035	0.0037	0.0050 U
	3/3/2015	0.0002 U	0.0027	0.0026	0.100 UJ
	9/28/2015	0.0002 U	0.0033	0.0032	0.010 U
	3/3/2016	0.0002 U	0.0020 U	0.0026	0.031
	9/13/2016(c)	--	--	--	--
	3/23/2017	0.0002 U	0.0030	0.0029	0.010 U
	9/6/2017	0.0002 U	0.0034	0.0035	0.010 U
ATC7-20	2/1/2006	0.0001 U	0.00740	--	0.00500 U
Duplicate	2/1/2006	0.0001 U	0.00746	--	0.00500 U
	8/10/2006*	0.0001 U	0.00481	--	0.0100 U
	2/13/2007	0.0001 U	0.00716	--	0.0100 U
	9/6/2007*	0.000147 J	0.00427	--	0.0100 U
	2/13/2008	0.0001 U	0.00549	--	0.0100 U
	9/10/2008	0.0001 U	0.00564	--	0.00500 U
	2/6/2009	0.000079	0.00469	--	0.00500 U
	8/20/2009	0.0002 U	0.00959	--	0.00500 U
	3/26/2010	0.0002 U	0.00423	--	0.00500 U
	8/18/2010	0.0002 U	0.00480	--	0.00500 U
	2/4/2011	0.0002 U	0.00598	0.00579	0.00500 U
	9/23/2011	0.0002 U	0.00523	0.00553	0.00500 U
	2/29/2012	0.00025 U	0.0051	0.0051	0.00500 U
	2/21/2013	0.0002 U	0.0053	0.0058	0.0050 U
	9/6/2013	0.0002 U	0.0043	0.0044	0.0050 U
	3/21/2014	0.0002 U	0.0052	0.0059	0.0050 U
	9/10/2014	0.0002 U	0.0048	0.0048	0.0050 U
	3/3/2015	0.0002 U	0.0067	0.0068	0.010 U
	9/28/2015	0.0002 U	0.0036	0.0036	0.010 U
	3/3/2016	0.0002 U	0.0035	0.0060	0.010 U
	9/13/2016	0.0002 U	0.0039	0.0039	0.010 U
	3/24/2017	0.0002 U	0.0060	0.0057	0.010 R
	9/6/2017	0.0002 U	0.0051	0.0046	0.010 U
Site Cleanup Level (b)		0.0002	0.006	0.006	0.01

TABLE 3
SUMMARY OF GROUNDWATER CHEMISTRY DATA
ARSENIC, CYANIDE AND MERCURY
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Total Mercury (mg/L)	Total Arsenic (mg/L)	Dissolved Arsenic (mg/L)	WAD Cyanide(a) (mg/L)
MW07-90	2/1/2006	0.0001 U	0.00703	--	0.00500 U
	8/9/2006	0.0001 U	0.00571	--	0.0100 U
Duplicate	8/9/2006	0.0001 U	0.00600	--	0.0100 U
	2/13/2007	0.0001 U	0.00547	--	0.0100 U
Duplicate	2/13/2007	0.0001 U	0.00517	--	0.0100 U
	9/6/2007	0.000152 J	0.00796	--	0.0100 U
Duplicate	9/6/2007	0.000173 J	0.00815	--	0.0100 U
	2/13/2008	0.0001 U	0.00725	--	0.0100 U
Duplicate	2/13/2008	0.0001 U	0.00907	--	0.0100 U
	9/10/2008	0.0001 U	0.00508	--	0.0051
Duplicate	9/10/2008	0.0001 U	0.00530	--	0.0058
	2/6/2009	0.0002 U	0.00477	--	0.00500 U
Duplicate	2/6/2009	0.0002 U	0.00484	--	0.00500 U
	8/20/2009	0.0002 U	0.00469	--	0.00500 U
Duplicate	8/20/2009	0.0002 U	0.00466	--	0.00670
	3/26/2010	0.0002 U	0.00443	--	0.00500 U
Duplicate	3/26/2010	0.0002 U	0.00443	--	0.00500 U
	8/18/2010	0.0002 U	0.00492	--	0.00500 U
Duplicate	8/18/2010	0.0002 U	0.00474	--	0.00500 U
	2/4/2011	0.0002 U	0.00490	0.00489	0.00500 U
Duplicate	2/4/2011	0.0002 U	0.00524	0.00498	0.00500 U
	9/23/2011	0.0002 U	0.00479	0.00530	0.00500 U
Duplicate	9/23/2011	0.0002 U	0.00503	0.00515	0.00500 U
	2/29/2012	0.0002 U	0.0048	0.0050	0.00500 U
Duplicate	2/29/2012	0.0002 U	0.0047	0.0049	0.00500 U
	9/6/2012	0.0002 U	0.0057	0.0055	0.00500 UJ
Duplicate	9/6/2012	0.0002 U	0.0052	0.0054	0.03000 J
	2/21/2013	0.0002 U	0.0049	0.0045	0.0050 U
Duplicate	2/21/2013	0.0002 U	0.0046	0.0049	0.0050 U
	9/6/2013	0.0002 U	0.0055	0.0057	0.0050 U
Duplicate	9/6/2013	0.0002 U	0.0055	0.0054	0.0050 U
	3/21/2014	0.0002 U	0.0051	0.0055	0.0050 U
Duplicate	3/21/2014	0.0002 U	0.0049	0.0055	0.0050 U
	9/10/2014	0.0002 U	0.0065	0.0060	0.0050 U
Duplicate	9/10/2014	0.0002 U	0.0060	0.0062	0.0050 U
	3/3/2015	0.0002 U	0.0058	0.0055	0.010 U
Duplicate	3/3/2015	0.0002 U	0.0061	0.0055	0.010 U
	9/28/2015	0.0002 U	0.0045	0.0042	0.010 U
Duplicate	9/28/2015	0.0002 U	0.0046	0.0039	0.010 U
	3/4/2016	0.0002 U	0.0028	0.0051	0.010 U
Duplicate	3/4/2016	0.0002 U	0.0026	0.0120	0.010 U
	9/13/2016	0.0002 U	0.0048	0.0047	0.010 U
Duplicate	9/13/2016	0.0002 U	0.0044	0.0046	0.010 U
	3/24/2017	0.0002 U	0.0046	0.0044	0.010 U
Duplicate	3/24/2017	0.0002 U	0.0047	0.0045	0.010 U
	9/6/2017	0.0002 U	0.0047	0.0044	0.010 U
Duplicate	9/6/2017	0.0002 U	0.0048	0.0043	0.010 U
Site Cleanup Level (b)		0.0002	0.006	0.006	0.01

Concentrations boxed and shaded are at or above site cleanup levels.

* Sample field filtered

-- = not analyzed.

NR = not run by laboratory.

NS = Not Specified.

NS = not specified.

J = Indicates the compound was detected, the reported sample concentration is an estimate.

(a) Weak Acid Dissociable (WAD) Cyanide analyzed by SM4500-CN-I.

(b) Final Cleanup Action Plan (Ecology 2001).

(c) Well is dry; groundwater sample not collected.

R = The data are unusable. The sample result is rejected due to deficiencies in meeting quality control criteria. The analyte may or may not be present in the sample.

TABLE 4
SUMMARY OF GROUNDWATER CHEMISTRY DATA
POLYCYCLIC AROMATIC HYDROCARBONS
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Polycyclic Aromatic Hydrocarbons (µg/L)(a)																		
		PAH											cPAH							
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Benzo {g,h,i} perylene	Pyrene	Benzo {a} anthracene(b)	Chrysene(b)	Benzo {b} fluoranthene(b)	Benzo {k} fluoranthene(b)	Benzo {a} pyrene(b)	Indeno {1,2,3-cd} pyrene(b)	Dibenz {a,h} anthracene(b)	Toxicity Equivalent Concentration(c)
MW02-20	2/1/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/9/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 UJ	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	ND
	2/13/2007	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/6/2007	0.100 UJ	NA	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.107 J	0.126 J	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.126 J	0.100 UJ	0.100 UJ	**0.13**
	2/13/2008	0.146	NA	0.100 U	0.117	0.100 U	0.100 U	0.243	0.126	1.05	1.04	1.50	0.932	1.05	0.748	1.16	0.893	0.816	0.272	**1.30**
	9/10/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.0943	0.100 U	0.100 U	0.09
	2/6/2009	0.100 U	NA	0.100 U	0.100 UJ	0.100 U	0.100 U	0.095	0.100 U	0.438	0.229 U	0.410	0.390	0.410	0.724	0.267 U	0.543 U	0.219 U	0.114 U	**0.66**
	8/20/2009	0.500 U	NA	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.32	1.35	1.24	1.30	1.57	2.92	0.500 U	1.89	1.16	0.500 U	**2.44**
	3/26/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/18/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/4/2011	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/23/2011	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	ND
	2/29/2012	0.0096 U	0.0096 U	0.013 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.019 U	0.0096 U	0.0096 U	ND
	9/6/2012	0.0100 U	0.0100 U	0.013 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.020 U	0.0100 U	0.0100 U	ND
	2/21/2013	0.0096 UJ	0.0096 UJ	0.012 UJ	0.0096 UJ	0.0096 U	0.0096 U	0.0096 UJ	0.0096 UJ	0.0096 UJ	0.0096 UJ	0.0096 UJ	0.0096 UJ	0.0096 UJ	0.0096 U	0.0096 UJ	0.019 UJ	0.0096 UJ	0.0096 UJ	ND
	9/6/2013	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	0.0958 U	ND
	3/21/2014	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	ND
	9/10/2014	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	0.0914 U	ND
	3/3/2015	0.083 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	0.0830 U	ND
	9/28/2015	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	3/4/2016	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	ND
	9/13/2016	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	ND
	3/23/2017	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	ND
	9/6/2017	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	ND
												Toxicity Equivalency Factor(d)	0.100	0.010	0.100	0.100	1.000	0.100	0.100	
Site Cleanup Level (e)		320	NS	NS	NS	643	640	NS	4800	90.2	NS	480	--	--	--	--	--	--	--	0.1

TABLE 4
SUMMARY OF GROUNDWATER CHEMISTRY DATA
POLYCYCLIC AROMATIC HYDROCARBONS
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Polycyclic Aromatic Hydrocarbons (µg/L)(a)																		
		PAH											cPAH							
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Benzo {g,h,i} perylene	Pyrene	Benzo {a} anthracene(b)	Chrysene(b)	Benzo {b} fluoranthene(b)	Benzo {k} fluoranthene(b)	Benzo {a} pyrene(b)	Indeno {1,2,3-cd} pyrene(b)	Dibenz {a,h} anthracene(b)	Toxicity Equivalent Concentration(c)
MW02-40	2/1/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/9/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 UJ	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	ND
	2/13/2007	0.100 U	NA	0.100 U	0.115	0.375	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.125	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/6/2007	0.100 UJ	NA	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	ND
	2/13/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/10/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/6/2009	0.100 U	NA	9.39	26.9 J	5.82	0.858	0.179	0.123	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.0943 U	ND
	8/20/2009	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	3/26/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/18/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/4/2011	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/23/2011	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	ND
	2/29/2012	0.0096 U	0.0096 U	0.013 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.019 U	0.0096 U	0.0096 U	ND
	9/6/2012	0.0120	0.0100 U	0.013 U	0.0110	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.020 U	0.0100 U	0.0100 U	ND
	2/21/2013	16 J	21 J	0.070 J	34 J	11	0.50	3.9 J	0.30 J	0.11 J	0.0097 UJ	0.11 J	0.0097 UJ	0.0097 UJ	0.0097 U	0.0097 UJ	0.019 UJ	0.0097 UJ	0.0097 UJ	ND
	9/6/2013	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	ND
	3/21/2014	17.0	31.8	1.85	42.3	14.5	2.82	0.625	0.115	0.0961 U	0.0961	0.154	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	0.0961 U	ND
	9/10/2014	0.176	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	ND
	3/3/2015	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	9/28/2015	0.098	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	3/3/2016	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	ND
	9/13/2016	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	ND
	3/23/2017	0.083 U	0.083 U	0.083 U	0.16	0.21	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	9/6/2017	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	ND
												Toxicity Equivalency Factor(d)	0.100	0.010	0.100	0.100	1.000	0.100	0.100	
Site Cleanup Level (e)		320	NS	NS	NS	643	640	NS	4800	90.2	NS	480	--	--	--	--	--	--	--	0.1

TABLE 4
SUMMARY OF GROUNDWATER CHEMISTRY DATA
POLYCYCLIC AROMATIC HYDROCARBONS
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Polycyclic Aromatic Hydrocarbons (µg/L)(a)																		
		PAH											cPAH							
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Benzo {g,h,i} perylene	Pyrene	Benzo {a} anthracene(b)	Chrysene(b)	Benzo {b} fluoranthene(b)	Benzo {k} fluoranthene(b)	Benzo {a} pyrene(b)	Indeno {1,2,3-cd} pyrene(b)	Dibenz {a,h} anthracene(b)	Toxicity Equivalent Concentration(c)
MW04-20	2/1/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/10/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 UJ	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	ND
	2/13/2007	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/6/2007	0.100 UJ	NA	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	ND
	2/13/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/10/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/6/2009	0.100 U	NA	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/20/2009	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	3/26/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/18/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/4/2011	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/23/2011	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	ND
	2/29/2012	0.0096 U	0.0096 U	0.013 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.019 U	0.0096 U	0.0096 U	ND
	9/6/2012	0.0100 U	0.0100 U	0.013 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.020 U	0.0100 U	0.0100 U	ND
	2/21/2013	0.0097 U	0.0097 U	0.013 U	0.0097 U	0.0097 U	0.0097 U	0.0097 U	0.0097 U	0.0097 U	0.0097 UJ	0.0097 U	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.019 UJ	0.0097 UJ	0.0097 UJ	ND
	9/6/2013	0.0967 U	0.0967 U	0.097 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.0967 U	0.097 U	0.0967 U	0.0967 U	ND
	3/21/2014	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	0.0964 U	ND
	9/10/2014	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	0.0905 U	ND
	3/3/2015	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	ND
	9/28/2015	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	ND
	3/3/2016	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	0.044 U	ND
	9/13/2016(c)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/23/2017	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U	ND
	9/6/2017	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	ND
												Toxicity Equivalency Factor(d)	0.100	0.010	0.100	0.100	1.000	0.100	0.100	
Site Cleanup Level (e)		320	NS	NS	NS	643	640	NS	4800	90.2	NS	480	--	--	--	--	--	--	--	0.1

TABLE 4
SUMMARY OF GROUNDWATER CHEMISTRY DATA
POLYCYCLIC AROMATIC HYDROCARBONS
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Polycyclic Aromatic Hydrocarbons (µg/L)(a)																		
		PAH											cPAH							
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Benzo (g,h,i) perylene	Pyrene	Benzo (a) anthracene(b)	Chrysene(b)	Benzo (b) fluoranthene(b)	Benzo (k) fluoranthene(b)	Benzo (a) pyrene(b)	Indeno (1,2,3-cd) pyrene(b)	Dibenz (a,h) anthracene(b)	Toxicity Equivalent Concentration(c)
ATC7-20	2/1/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	2/1/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/10/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 UJ	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	ND
	2/13/2007	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/6/2007	0.100 UJ	NA	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	ND
	2/13/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/10/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/6/2009	0.100 U	NA	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/20/2009	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	3/26/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/18/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/4/2011	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/23/2011	0.263	0.105 U	0.295	0.253	0.105 U	0.179	0.389	0.105	0.105 U	0.105 U	0.116	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	ND
	2/29/2012	0.0096 U	0.0096 U	0.013 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.019 U	0.0096 U	0.0096 U	ND
	9/6/2012	0.0100 U	0.0100 U	0.013 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.020 U	0.0100 U	0.0100 U	ND
	2/21/2013	0.0095 UJ	0.0095 UJ	0.012 UJ	0.0095 UJ	0.0095 U	0.0095 U	0.0095 UJ	0.0095 UJ	0.0095 UJ	0.0095 UJ	0.0095 UJ	0.0095 UJ	0.0095 UJ	0.0095 U	0.0095 UJ	0.019 UJ	0.0095 UJ	0.0095 UJ	ND
	9/6/2013	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	0.0957 U	ND
	3/21/2014	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	0.0949 U	ND
	9/10/2014	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	0.0903 U	ND
	3/3/2015	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	ND
	9/28/2015	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	3/3/2016	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	ND
	9/13/2016	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	3/24/2017	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	9/6/2017	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	0.090 U	ND
												Toxicity Equivalency Factor(d)	0.100	0.010	0.100	0.100	1.000	0.100	0.100	
Site Cleanup Level (e)		320	NS	NS	NS	643	640	NS	4800	90.2	NS	480	--	--	--	--	--	--	--	0.1

TABLE 4
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POLYCYCLIC AROMATIC HYDROCARBONS
Hamilton Street Bridge Site
Spokane, Washington

Well	Date Sampled	Polycyclic Aromatic Hydrocarbons (µg/L)(a)																		
		PAH											cPAH							
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Benzo {g,h,i} perylene	Pyrene	Benzo {a} anthracene(b)	Chrysene(b)	Benzo {b} fluoranthene(b)	Benzo {k} fluoranthene(b)	Benzo {a} pyrene(b)	Indeno {1,2,3-cd} pyrene(b)	Dibenz {a,h} anthracene(b)	Toxicity Equivalent Concentration(c)
MW07-90	2/1/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/9/2006	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 UJ	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 UJ	0.107	0.01
Duplicate	8/9/2006	0.100 U	NA	0.100 U	0.107	0.117	0.136	0.165	0.146	0.155	0.214 J	0.204 J	0.194	0.117	0.214 J	0.175	0.194	0.214 J	0.184	**0.29**
	2/13/2007	0.100 U	NA	0.100 U	0.117	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	2/13/2007	0.100 U	NA	0.100 U	0.126	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/6/2007	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	9/6/2007	0.100 UJ	NA	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	0.100 UJ	ND
	2/13/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	2/13/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/10/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	9/10/2008	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/6/2009	0.100 U	NA	0.100 U	0.396 J	0.0966	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	2/6/2009	0.100 U	NA	0.100 U	0.100 UJ	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.105 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.124 U	0.124 U	ND
	8/20/2009	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	8/20/2009	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	3/26/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	3/26/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	8/18/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	8/18/2010	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	2/4/2011	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
Duplicate	2/4/2011	0.100 U	NA	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	ND
	9/23/2011	0.105 UJ	0.105 UJ	0.105 UJ	0.105 UJ	0.105 U	0.105 UJ	0.105 UJ	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	ND
Duplicate	9/23/2011	1.13 J	0.484 J	1.64 J	0.832 J	0.105 U	0.295 J	0.442 J	0.126	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	0.105 U	ND
											Toxicity Equivalency Factor(d)		0.100	0.010	0.100	0.100	1.000	0.100	0.100	
Site Cleanup Level (e)		320	NS	NS	NS	643	640	NS	4800	90.2	NS	480	--	--	--	--	--	--	--	--	0.1

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Well	Date Sampled	Polycyclic Aromatic Hydrocarbons (µg/L)(a)																		
		PAH											cPAH							
		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Benzo (g,h,i) perylene	Pyrene	Benzo (a) anthracene(b)	Chrysene(b)	Benzo (b) fluoranthene(b)	Benzo (k) fluoranthene(b)	Benzo (a) pyrene(b)	Indeno (1,2,3-cd) pyrene(b)	Dibenz (a,h) anthracene(b)	Toxicity Equivalent Concentration(c)
MW07-90 Contin.																				
	2/29/2012	0.0096 U	0.0096 U	0.013 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.019 U	0.0096 U	0.0096 U	ND
Duplicate	2/29/2012	0.0096 U	0.0096 U	0.013 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.0096 U	0.019 U	0.0096 U	0.0096 U	ND
	9/6/2012	0.0100 U	0.0100 U	0.013 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.020 U	0.0100 U	0.0100 U	ND
Duplicate	9/6/2012	0.0100 U	0.0100 U	0.013 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.0100 U	0.020 U	0.0100 U	0.0100 U	ND
	2/21/2013	0.0097 UJ	0.010	0.013 UJ	0.014 J	0.0097 U	0.0097 U	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.0097 UJ	0.0097 U	0.0097 UJ	0.0097 U	0.019 UJ	0.0097 UJ	0.0097 UJ	ND
Duplicate	2/21/2013	0.0098 UJ	0.0098 UJ	0.013 UJ	0.0098 UJ	0.0098 UJ	0.0098 U	0.0098 UJ	0.0098 UJ	0.0098 UJ	0.0098 UJ	0.0098 UJ	0.0098 UJ	0.0098 UJ	0.0098 U	0.0098 UJ	0.0098 U	0.020 UJ	0.0098 UJ	0.0098 UJ	ND
	9/6/2013	0.0974 U	0.0974 U	0.097 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	0.0974 U	ND
Duplicate	9/6/2013	0.0977 U	0.0977 U	0.098 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	0.0977 U	ND
	3/21/2014	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	0.0959 U	ND
Duplicate	3/21/2014	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	0.0952 U	ND
	9/10/2014	0.0899 U	0.0899 U	0.0899 U	0.0899 U	0.0899 U	0.0899 U	0.0940	0.0899 U	0.0899 U	0.0899 U	0.0899 U	0.0899 U	0.292 J	0.0899 U	0.0899 U	0.102	0.0899 U	0.0899 U	0.0899 U	**0.1J**
Duplicate	9/10/2014	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 UJ	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	0.0896 U	ND
	3/3/2015	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
Duplicate	3/3/2015	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	9/28/2015	0.22	0.45	0.083 U	0.19	2.0	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
Duplicate	9/28/2015	0.24	0.48	0.083 U	0.21	2.2	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	3/4/2016	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	0.047 U	ND
Duplicate	3/4/2016	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	ND
	9/13/2016	2.3 J	3.8	0.083 U	0.34	4.0	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
Duplicate	9/13/2016	3.0 J	4.0	0.083 U	0.34	3.9	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	0.083 U	ND
	3/24/2017	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	ND
Duplicate	3/24/2017	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	0.084 U	ND
	9/6/2017	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	ND
Duplicate	9/6/2017	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	ND
												Toxicity Equivalency Factor(d)	0.100	0.010	0.100	0.100	1.000	0.100	0.100	
Site Cleanup Level (e)		320	NS	NS	NS	643	640	NS	4800	90.2	NS	480	--	--	--	--	--	--	--	0.1

Notes:

NA = not analyzed, NS = Not Specified

U = Indicates the compound was analyzed for, but was not detected at the given detection limit. Values may be rounded.

J = Indicates the compound was detected, the reported sample concentration is an estimate.

Concentrations in bold are detected above the laboratory quantitation limit.

Concentration boxed and shaded are at or above the site cleanup level

(a) Polycyclic Aromatic Hydrocarbons (PAH) analyzed by EPA Method 8270-SIM.

(b) Carcinogenic PAH (cPAH).

(c) Well is dry; groundwater sample not collected.

(c) Calculated in accordance with WAC 173-340-708(8).

(d) Toxicity Equivalency Factors for cPAHs, WAC 173-340 (Ecology 2007).

(e) Final Cleanup Action Plan (Ecology 2001).

Duplicate Sample ID = MW20-60

Laboratory Data Sheets and Chain-of-Custody Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-6997-1
Client Project/Site: Avista Hamilton St. Bridge

For:
Landau & Associates, Inc.
10 North Post Street, Suite 218
Spokane, Washington 99201

Attn: Mr. Ryan Reich

Authorized for release by:
9/21/2017 10:41:50 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

Table of Contents

Case Narrative

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Job ID: 590-6997-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 9/7/2017 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7º C.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 245.1: The matrix spike (MS) recoveries for preparation batch 590-13787 and analytical batch 590-13800 were outside control limits. Spiking error is suspected because the associated laboratory control sample (LCS) and matrix spike duplicate (MSD) recoveries are within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-6997-1	ATC7-20-090617	Water	09/06/17 11:25	09/07/17 09:00
590-6997-2	MW2-40-090617	Water	09/06/17 13:30	09/07/17 09:00
590-6997-3	MW2-20-090617	Water	09/06/17 14:10	09/07/17 09:00
590-6997-4	MW7-90-090617	Water	09/06/17 15:50	09/07/17 09:00
590-6997-5	MW4-20-090617	Water	09/06/17 16:40	09/07/17 09:00
590-6997-6	MW20-60-090617	Water	09/06/17 17:05	09/07/17 09:00

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-6997 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Shane Kostka	Lab PM: Arrington, Randee E	COC No: 590-2977-808.1
Client Contact: Mr. Ryan Reich	Phone: 208-819-1965	E-Mail: randee.arrington@testamericainc.com	Page: Page 1 of 1
Company: Landau & Associates, Inc.			Job #:
Address: 10 North Post Street, Suite 218	Due Date Requested:		
City: Spokane	TAT Requested (days):		
State, Zip: WA, 99201			
Phone: 509-995-1665(Tel)	PO #: Purchase Order not required		
Email: rreich@landauinc.com	WO #:		
Project Name: Avista Hamilton St. Bridge	Project #: 59000367		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500_CN_I - Cyanide, Weak Acid Dissociable	200.8_CWA_LL - As	200.8_CWA_LL - As	8270D_SIM - Polycyclic Aromatic Hydrocarbons	245.1 - Hg	Total Number of containers	Special Instructions/Note:
			Preservation Code:				B	D	N	N	D		
ATC 7-20-090617	9/6/17	11:25		Water			X	X	X	X	X	5	As QL ⇒ 1 ug/L
MW 2-40-090617		13:30		Water									Hg QL ⇒ 0.2 ug/L
MW 2-20-090617		14:10		Water									PAH QL ⇒ 0.1 ug/L
MW 7-90-090617		15:50		Water									Cyanide QL ⇒ 10 ug/L
MW 4-20-090617		16:40		Water									
MW 20-60-090617		17:05		Water									

Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)** ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Shane Kostka	Date/Time: 9/6/17, 17:22	Company: LAI	Received by: Ryan Reich	Date/Time: 9-6-17 17:22	Company		
Relinquished by: Ryan Reich	Date/Time: 9-7-17, 9:00	Company	Received by:	Date/Time: 9/7/17 900	Company: TA Spok		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: △ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.7 °C IR0004

9/21/2017

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

590-6997 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 9/8/2017 @1000

Time Samples Removed From Cooler_____ Time Samples Placed In Storage_____ (2 Hour Window)

1. Tracking # 3190 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 17960358 pH Strip Lot_____ Chlorine Strip Lot_____

2. Temperature of rep. sample or temp blank when opened: 1.0 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (Side)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JJ

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ES

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ES

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ES

I certify that I attached a label with the unique LIMS number to each container (intial) ES

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

590-6997

estAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E		C No: 0-2999.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State Program - Washington		Job #: 590-6997-1
Address: 2960 Foster Creighton Drive,	Due Date Requested: 9/19/2017			
City: Nashville	TAT Requested (days):			
State, Zip: TN, 37204				
Phone: 615-726-0177(Tel) 615-726-3404(Fax)	PO #:			
Email:	WO #:			
Project Name: Avista Hamilton St. Bridge	Project #: 59000367			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500_CN_I/4500_CN_I_Prep Weak Acid Dissociable Cyanide	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
ATC7-20-090617 (590-6997-1)	9/6/17	11:25 Pacific		Water			X	1	
MW2-40-090617 (590-6997-2)	9/6/17	13:30 Pacific		Water			X	1	
MW2-20-090617 (590-6997-3)	9/6/17	14:10 Pacific		Water			X	1	
MW7-90-090617 (590-6997-4)	9/6/17	15:50 Pacific		Water			X	1	
MW4-20-090617 (590-6997-5)	9/6/17	16:40 Pacific		Water			X	1	
MW20-60-090617 (590-6997-6)	9/6/17	17:05 Pacific		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:		
Relinquished by: Sheila Kratz	Date/Time: 9/7/17 1535	Company TAL SPK	Received by:	Date/Time: 9-8-17 1000	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.0

9/21/2017

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2998.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: randee.arrington@testamericainc.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-6997-1
Address: 5755 8th Street East,	Due Date Requested: 9/19/2017			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel) 253-922-5047(Fax)	PO #:			
Email:	WO #:			
Project Name: Avista Hamilton St. Bridge	Project #: 59000367			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8_CWA_LL/200.8_P_TOT (MOD) Total Arsenic	200.8_CWA_LL/FILTRATION (MOD) Dissolved Arsenic	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
ATC7-20-090617 (590-6997-1)	9/6/17	11:25 Pacific		Water			X	X	2	
MW2-40-090617 (590-6997-2)	9/6/17	13:30 Pacific		Water			X	X	2	
MW2-20-090617 (590-6997-3)	9/6/17	14:10 Pacific		Water			X	X	2	
MW7-90-090617 (590-6997-4)	9/6/17	15:50 Pacific		Water			X	X	2	
MW4-20-090617 (590-6997-5)	9/6/17	16:40 Pacific		Water			X	X	2	
MW20-60-090617 (590-6997-6)	9/6/17	17:05 Pacific		Water			X	X	2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Sheila Kraft	9/7/17 1525	TA Spot	Michael McDermott	9/8/17 0935	TA-Spo
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 590-6997-1

Login Number: 6997

List Source: TestAmerica Spokane

List Number: 1

Creator: Kratz, Sheila J

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 590-6997-1

Login Number: 6997
List Number: 3
Creator: Stewart, Eric S

List Source: TestAmerica Nashville
List Creation: 09/08/17 04:37 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Landau & Associates, Inc.

Job Number: 590-6997-1

Login Number: 6997
List Number: 2
Creator: Blankinship, Tom X

List Source: TestAmerica Seattle
List Creation: 09/08/17 10:30 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-0.5°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	verified at TA-Spokane
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: ATC7-20-090617
Date Collected: 09/06/17 11:25
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
2-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
1-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Acenaphthylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Acenaphthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Fluorene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Phenanthrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Benzo[a]anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Chrysene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Benzo[b]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Benzo[k]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Benzo[a]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*45 - 126*	*09/11/17 09:28*	*09/11/17 12:33*	*1*
2-Fluorobiphenyl (Surr)	*70*		*44 - 120*	*09/11/17 09:28*	*09/11/17 12:33*	*1*
p-Terphenyl-d14	*76*		*51 - 121*	*09/11/17 09:28*	*09/11/17 12:33*	*1*

Client Sample ID: MW2-40-090617
Date Collected: 09/06/17 13:30
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
2-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
1-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Acenaphthylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Acenaphthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Fluorene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Phenanthrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Benzo[a]anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Chrysene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Benzo[b]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Benzo[k]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Benzo[a]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 12:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*72*		*45 - 126*	*09/11/17 09:28*	*09/11/17 12:59*	*1*
2-Fluorobiphenyl (Surr)	*69*		*44 - 120*	*09/11/17 09:28*	*09/11/17 12:59*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: MW2-40-090617
Date Collected: 09/06/17 13:30
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-2
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl-d14	*75*		*51 - 121*	*09/11/17 09:28*	*09/11/17 12:59*	*1*

Client Sample ID: MW2-20-090617
Date Collected: 09/06/17 14:10
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
2-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
1-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Acenaphthylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Acenaphthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Fluorene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Phenanthrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Benzo[a]anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Chrysene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Benzo[b]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Benzo[k]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Benzo[a]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*45 - 126*	*09/11/17 09:28*	*09/11/17 13:26*	*1*
2-Fluorobiphenyl (Surr)	*71*		*44 - 120*	*09/11/17 09:28*	*09/11/17 13:26*	*1*
p-Terphenyl-d14	*81*		*51 - 121*	*09/11/17 09:28*	*09/11/17 13:26*	*1*

Client Sample ID: MW7-90-090617
Date Collected: 09/06/17 15:50
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
2-Methylnaphthalene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
1-Methylnaphthalene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Acenaphthylene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Acenaphthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Fluorene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Phenanthrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Anthracene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Fluoranthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Pyrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Benzo[a]anthracene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Chrysene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Benzo[b]fluoranthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Benzo[k]fluoranthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Benzo[a]pyrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: MW7-90-090617
Date Collected: 09/06/17 15:50
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*45 - 126*	*09/11/17 09:28*	*09/11/17 13:52*	*1*
2-Fluorobiphenyl (Surr)	*69*		*44 - 120*	*09/11/17 09:28*	*09/11/17 13:52*	*1*
p-Terphenyl-d14	*77*		*51 - 121*	*09/11/17 09:28*	*09/11/17 13:52*	*1*

Client Sample ID: MW4-20-090617
Date Collected: 09/06/17 16:40
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
2-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
1-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Acenaphthylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Acenaphthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Fluorene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Phenanthrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Benzo[a]anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Chrysene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Benzo[b]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Benzo[k]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Benzo[a]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*75*		*45 - 126*	*09/11/17 09:28*	*09/11/17 14:19*	*1*
2-Fluorobiphenyl (Surr)	*70*		*44 - 120*	*09/11/17 09:28*	*09/11/17 14:19*	*1*
p-Terphenyl-d14	*75*		*51 - 121*	*09/11/17 09:28*	*09/11/17 14:19*	*1*

Client Sample ID: MW20-60-090617
Date Collected: 09/06/17 17:05
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
2-Methylnaphthalene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
1-Methylnaphthalene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Acenaphthylene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Acenaphthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Fluorene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Phenanthrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Anthracene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Fluoranthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Pyrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: MW20-60-090617 — **Lab Sample ID: 590-6997-6**
Date Collected: 09/06/17 17:05 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Chrysene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Benzo[b]fluoranthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Benzo[k]fluoranthene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Benzo[a]pyrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Indeno[1,2,3-cd]pyrene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Dibenz(a,h)anthracene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1
Benzo[g,h,i]perylene	ND		0.091		ug/L		09/11/17 09:28	09/11/17 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*45 - 126*	*09/11/17 09:28*	*09/11/17 14:45*	*1*
2-Fluorobiphenyl (Surr)	*71*		*44 - 120*	*09/11/17 09:28*	*09/11/17 14:45*	*1*
p-Terphenyl-d14	*81*		*51 - 121*	*09/11/17 09:28*	*09/11/17 14:45*	*1*

Method: 200.8 LL - Metals (ICP/MS)

Client Sample ID: ATC7-20-090617 — **Lab Sample ID: 590-6997-1**
Date Collected: 09/06/17 11:25 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0051		0.0010		mg/L		09/20/17 08:41	09/20/17 21:00	1

Client Sample ID: MW2-40-090617 — **Lab Sample ID: 590-6997-2**
Date Collected: 09/06/17 13:30 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0016		0.0010		mg/L		09/20/17 08:41	09/20/17 21:40	1

Client Sample ID: MW2-20-090617 — **Lab Sample ID: 590-6997-3**
Date Collected: 09/06/17 14:10 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0019		0.0010		mg/L		09/20/17 08:41	09/20/17 21:44	1

Client Sample ID: MW7-90-090617 — **Lab Sample ID: 590-6997-4**
Date Collected: 09/06/17 15:50 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0047		0.0010		mg/L		09/20/17 08:41	09/20/17 21:48	1

Client Sample ID: MW4-20-090617 — **Lab Sample ID: 590-6997-5**
Date Collected: 09/06/17 16:40 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0034		0.0010		mg/L		09/20/17 08:41	09/20/17 21:51	1

Client Sample ID: MW20-60-090617 — **Lab Sample ID: 590-6997-6**
Date Collected: 09/06/17 17:05 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0046		0.0010		mg/L		09/20/17 08:41	09/20/17 21:55	1

Method: 200.8 LL - Metals (ICP/MS) - Dissolved

Client Sample ID: ATC7-20-090617 — **Lab Sample ID: 590-6997-1**
Date Collected: 09/06/17 11:25 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0046		0.0010		mg/L		09/19/17 18:03	09/20/17 09:15	1

Client Sample ID: MW2-40-090617 — **Lab Sample ID: 590-6997-2**
Date Collected: 09/06/17 13:30 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0014		0.0010		mg/L		09/19/17 18:03	09/20/17 09:56	1

Client Sample ID: MW2-20-090617 — **Lab Sample ID: 590-6997-3**
Date Collected: 09/06/17 14:10 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0018		0.0010		mg/L		09/19/17 18:03	09/20/17 09:59	1

Client Sample ID: MW7-90-090617 — **Lab Sample ID: 590-6997-4**
Date Collected: 09/06/17 15:50 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0044		0.0010		mg/L		09/19/17 18:03	09/20/17 10:03	1

Client Sample ID: MW4-20-090617 — **Lab Sample ID: 590-6997-5**
Date Collected: 09/06/17 16:40 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0035		0.0010		mg/L		09/19/17 18:03	09/20/17 10:07	1

Client Sample ID: MW20-60-090617 — **Lab Sample ID: 590-6997-6**
Date Collected: 09/06/17 17:05 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	0.0043		0.0010		mg/L		09/19/17 18:03	09/20/17 10:10	1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: ATC7-20-090617 — **Lab Sample ID: 590-6997-1**
Date Collected: 09/06/17 11:25 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.20		ug/L		09/14/17 09:37	09/14/17 14:37	1

Client Sample ID: MW2-40-090617 — **Lab Sample ID: 590-6997-2**
Date Collected: 09/06/17 13:30 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	F1 F2	0.20		ug/L		09/14/17 09:37	09/14/17 14:42	1

Client Sample ID: MW2-20-090617 — **Lab Sample ID: 590-6997-3**
Date Collected: 09/06/17 14:10 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.20		ug/L		09/14/17 09:38	09/14/17 14:49	1

Method: 245.1 - Mercury (CVAA)

Client Sample ID: MW7-90-090617 — **Lab Sample ID: 590-6997-4**
Date Collected: 09/06/17 15:50 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.20		ug/L		09/14/17 09:38	09/14/17 14:55	1

Client Sample ID: MW4-20-090617 — **Lab Sample ID: 590-6997-5**
Date Collected: 09/06/17 16:40 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.20		ug/L		09/14/17 09:38	09/14/17 14:58	1

Client Sample ID: MW20-60-090617 — **Lab Sample ID: 590-6997-6**
Date Collected: 09/06/17 17:05 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.20		ug/L		09/14/17 09:38	09/14/17 15:00	1

General Chemistry

Client Sample ID: ATC7-20-090617 — **Lab Sample ID: 590-6997-1**
Date Collected: 09/06/17 11:25 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:28	1

Client Sample ID: MW2-40-090617 — **Lab Sample ID: 590-6997-2**
Date Collected: 09/06/17 13:30 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:29	1

Client Sample ID: MW2-20-090617 — **Lab Sample ID: 590-6997-3**
Date Collected: 09/06/17 14:10 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:30	1

Client Sample ID: MW7-90-090617 — **Lab Sample ID: 590-6997-4**
Date Collected: 09/06/17 15:50 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:31	1

Client Sample ID: MW4-20-090617 — **Lab Sample ID: 590-6997-5**
Date Collected: 09/06/17 16:40 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:32	1

Client Sample ID: MW20-60-090617 — **Lab Sample ID: 590-6997-6**
Date Collected: 09/06/17 17:05 — **Matrix: Water**
Date Received: 09/07/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:33	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 590-13718/1-A
Matrix: Water
Analysis Batch: 13717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13718

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
2-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
1-Methylnaphthalene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Acenaphthylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Acenaphthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Fluorene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Phenanthrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Benzo[a]anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Chrysene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Benzo[b]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Benzo[k]fluoranthene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Benzo[a]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Indeno[1,2,3-cd]pyrene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Dibenz(a,h)anthracene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1
Benzo[g,h,i]perylene	ND		0.090		ug/L		09/11/17 09:28	09/11/17 11:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*45 - 126*	*09/11/17 09:28*	*09/11/17 11:13*	*1*
2-Fluorobiphenyl (Surr)	*75*		*44 - 120*	*09/11/17 09:28*	*09/11/17 11:13*	*1*
p-Terphenyl-d14	*90*		*51 - 121*	*09/11/17 09:28*	*09/11/17 11:13*	*1*

Lab Sample ID: LCS 590-13718/2-A
Matrix: Water
Analysis Batch: 13717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13718

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	1.60	1.33		ug/L		83	52 - 121
2-Methylnaphthalene	1.60	1.30		ug/L		81	44 - 134
1-Methylnaphthalene	1.60	1.30		ug/L		82	56 - 123
Acenaphthylene	1.60	1.32		ug/L		83	57 - 134
Acenaphthene	1.60	1.36		ug/L		85	54 - 132
Fluorene	1.60	1.36		ug/L		85	59 - 141
Phenanthrene	1.60	1.50		ug/L		94	57 - 141
Anthracene	1.60	1.44		ug/L		90	60 - 136
Fluoranthene	1.60	1.50		ug/L		94	76 - 133
Pyrene	1.60	1.35		ug/L		85	59 - 145
Benzo[a]anthracene	1.60	1.40		ug/L		87	76 - 138
Chrysene	1.60	1.46		ug/L		91	69 - 138
Benzo[b]fluoranthene	1.60	1.55		ug/L		97	69 - 144
Benzo[k]fluoranthene	1.60	1.50		ug/L		94	67 - 141
Benzo[a]pyrene	1.60	1.40		ug/L		87	70 - 141
Indeno[1,2,3-cd]pyrene	1.60	1.37		ug/L		86	73 - 146
Dibenz(a,h)anthracene	1.60	1.38		ug/L		86	68 - 144
Benzo[g,h,i]perylene	1.60	1.41		ug/L		88	68 - 150

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 590-13718/2-A
Matrix: Water
Analysis Batch: 13717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13718

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	82		45 - 126
2-Fluorobiphenyl (Surr)	76		44 - 120
p-Terphenyl-d14	85		51 - 121

Lab Sample ID: LCSD 590-13718/3-A
Matrix: Water
Analysis Batch: 13717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13718

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	1.60	1.13		ug/L		71	52 - 121	16	30
2-Methylnaphthalene	1.60	1.09		ug/L		68	44 - 134	17	30
1-Methylnaphthalene	1.60	1.09		ug/L		68	56 - 123	18	30
Acenaphthylene	1.60	1.16		ug/L		73	57 - 134	13	30
Acenaphthene	1.60	1.20		ug/L		75	54 - 132	13	30
Fluorene	1.60	1.22		ug/L		76	59 - 141	11	30
Phenanthrene	1.60	1.33		ug/L		83	57 - 141	12	30
Anthracene	1.60	1.26		ug/L		79	60 - 136	13	30
Fluoranthene	1.60	1.35		ug/L		84	76 - 133	11	30
Pyrene	1.60	1.24		ug/L		77	59 - 145	9	30
Benzo[a]anthracene	1.60	1.29		ug/L		81	76 - 138	8	30
Chrysene	1.60	1.33		ug/L		83	69 - 138	9	30
Benzo[b]fluoranthene	1.60	1.45		ug/L		90	69 - 144	7	30
Benzo[k]fluoranthene	1.60	1.37		ug/L		85	67 - 141	9	30
Benzo[a]pyrene	1.60	1.28		ug/L		80	70 - 141	9	30
Indeno[1,2,3-cd]pyrene	1.60	1.23		ug/L		77	73 - 146	11	30
Dibenz(a,h)anthracene	1.60	1.24		ug/L		77	68 - 144	11	30
Benzo[g,h,i]perylene	1.60	1.25		ug/L		78	68 - 150	11	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5	72		45 - 126
2-Fluorobiphenyl (Surr)	59		44 - 120
p-Terphenyl-d14	80		51 - 121

Method: 200.8 LL - Metals (ICP/MS)

Lab Sample ID: LCS 580-256658/11-A
Matrix: Water
Analysis Batch: 256731

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 256658

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
As	0.100	0.0976		mg/L		98	85 - 115

Lab Sample ID: LCSD 580-256658/12-A
Matrix: Water
Analysis Batch: 256731

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 256658

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
As	0.100	0.101		mg/L		101	85 - 115	3	20

Lab Sample ID: MB 580-256669/14-A
Matrix: Water
Analysis Batch: 256833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 256669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	ND		0.0010		mg/L		09/20/17 08:41	09/20/17 20:56	1

Lab Sample ID: LCS 580-256669/15-A
Matrix: Water
Analysis Batch: 256833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 256669

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
As	0.100	0.0947		mg/L		95	85 - 115

Lab Sample ID: LCSD 580-256669/16-A
Matrix: Water
Analysis Batch: 256833

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 256669

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
As	0.100	0.0960		mg/L		96	85 - 115	1	20

Lab Sample ID: 590-6997-1 MS
Matrix: Water
Analysis Batch: 256833

Client Sample ID: ATC7-20-090617
Prep Type: Total/NA
Prep Batch: 256669

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
As	0.0051		0.100	0.104		mg/L		99	70 - 130

Lab Sample ID: 590-6997-1 MSD
Matrix: Water
Analysis Batch: 256833

Client Sample ID: ATC7-20-090617
Prep Type: Total/NA
Prep Batch: 256669

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
As	0.0051		0.100	0.104		mg/L		98	70 - 130	0	20

Lab Sample ID: 590-6997-1 DU
Matrix: Water
Analysis Batch: 256833

Client Sample ID: ATC7-20-090617
Prep Type: Total/NA
Prep Batch: 256669

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
As	0.0051		0.00499		mg/L		3	20

Lab Sample ID: MB 580-256156/8-B
Matrix: Water
Analysis Batch: 256731

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 256658

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
As	ND		0.0010		mg/L		09/19/17 18:03	09/20/17 09:12	1

Lab Sample ID: 590-6997-1 MS
Matrix: Water
Analysis Batch: 256731

Client Sample ID: ATC7-20-090617
Prep Type: Dissolved
Prep Batch: 256658

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
As	0.0046		0.100	0.0974		mg/L		93	70 - 130

Method: 200.8 LL - Metals (ICP/MS) (Continued)

Lab Sample ID: 590-6997-1 MSD — **Client Sample ID: ATC7-20-090617**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 256731 — **Prep Batch: 256658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
As	0.0046		0.100	0.0999		mg/L		95	70 - 130	3	20

Lab Sample ID: 590-6997-1 DU — **Client Sample ID: ATC7-20-090617**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 256731 — **Prep Batch: 256658**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
As	0.0046		0.00450		mg/L		1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 590-13787/9-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 13800 — **Prep Batch: 13787**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.20		ug/L		09/14/17 09:37	09/14/17 14:30	1

Lab Sample ID: LCS 590-13787/8-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 13800 — **Prep Batch: 13787**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	2.00	1.97		ug/L		99	85 - 115

Lab Sample ID: 590-6997-2 MS — **Client Sample ID: MW2-40-090617**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 13800 — **Prep Batch: 13787**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Hg	ND	F1 F2	2.00	0.489	F1	ug/L		24	70 - 130

Lab Sample ID: 590-6997-2 MSD — **Client Sample ID: MW2-40-090617**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 13800 — **Prep Batch: 13787**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND	F1 F2	2.00	2.14	F2	ug/L		107	70 - 130	126	20

Lab Sample ID: 590-6997-1 DU — **Client Sample ID: ATC7-20-090617**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 13800 — **Prep Batch: 13787**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hg	ND		ND		ug/L		NC	20

Method: SM 4500 CN I - Cyanide, Weak Acid Dissociable

Lab Sample ID: MB 490-459906/1-A
Matrix: Water
Analysis Batch: 460011

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 459906

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Weak Acid Dissociable	ND		10		ug/L		09/14/17 11:07	09/14/17 15:22	1

Lab Sample ID: LCS 490-459906/2-A
Matrix: Water
Analysis Batch: 460011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 459906

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Weak Acid Dissociable	100	95.0		ug/L		95	80 - 120

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Client Sample ID: ATC7-20-090617

Lab Sample ID: 590-6997-1

Date Collected: 09/06/17 11:25

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			13718	09/11/17 09:28	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1	13717	09/11/17 12:33	NMI	TAL SPK
Dissolved	Filtration	FILTRATION			256156	09/14/17 11:44	MKN	TAL SEA
Dissolved	Prep	200.8			256658	09/19/17 18:03	PAB	TAL SEA
Dissolved	Analysis	200.8 LL		1	256731	09/20/17 09:15	FCW	TAL SEA
Total/NA	Prep	200.8			256669	09/20/17 08:41	MKN	TAL SEA
Total/NA	Analysis	200.8 LL		1	256833	09/20/17 21:00	FCW	TAL SEA
Total/NA	Prep	245.1			13787	09/14/17 09:37	JSP	TAL SPK
Total/NA	Analysis	245.1		1	13800	09/14/17 14:37	JSP	TAL SPK
Total/NA	Prep	SM 4500 CN I			459906	09/14/17 11:07	LDT	TAL NSH
Total/NA	Analysis	SM 4500 CN I		1	460011	09/14/17 15:28	SDL	TAL NSH

Client Sample ID: MW2-40-090617

Lab Sample ID: 590-6997-2

Date Collected: 09/06/17 13:30

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			13718	09/11/17 09:28	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1	13717	09/11/17 12:59	NMI	TAL SPK
Dissolved	Filtration	FILTRATION			256156	09/14/17 11:44	MKN	TAL SEA
Dissolved	Prep	200.8			256658	09/19/17 18:03	PAB	TAL SEA
Dissolved	Analysis	200.8 LL		1	256731	09/20/17 09:56	FCW	TAL SEA
Total/NA	Prep	200.8			256669	09/20/17 08:41	MKN	TAL SEA
Total/NA	Analysis	200.8 LL		1	256833	09/20/17 21:40	FCW	TAL SEA
Total/NA	Prep	245.1			13787	09/14/17 09:37	JSP	TAL SPK
Total/NA	Analysis	245.1		1	13800	09/14/17 14:42	JSP	TAL SPK
Total/NA	Prep	SM 4500 CN I			459906	09/14/17 11:07	LDT	TAL NSH
Total/NA	Analysis	SM 4500 CN I		1	460011	09/14/17 15:29	SDL	TAL NSH

Client Sample ID: MW2-20-090617

Lab Sample ID: 590-6997-3

Date Collected: 09/06/17 14:10

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			13718	09/11/17 09:28	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1	13717	09/11/17 13:26	NMI	TAL SPK
Dissolved	Filtration	FILTRATION			256156	09/14/17 11:44	MKN	TAL SEA
Dissolved	Prep	200.8			256658	09/19/17 18:03	PAB	TAL SEA
Dissolved	Analysis	200.8 LL		1	256731	09/20/17 09:59	FCW	TAL SEA
Total/NA	Prep	200.8			256669	09/20/17 08:41	MKN	TAL SEA
Total/NA	Analysis	200.8 LL		1	256833	09/20/17 21:44	FCW	TAL SEA
Total/NA	Prep	245.1			13787	09/14/17 09:38	JSP	TAL SPK
Total/NA	Analysis	245.1		1	13800	09/14/17 14:49	JSP	TAL SPK

Client Sample ID: MW2-20-090617

Lab Sample ID: 590-6997-3

Date Collected: 09/06/17 14:10

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 CN I			459906	09/14/17 11:07	LDT	TAL NSH
Total/NA	Analysis	SM 4500 CN I		1	460011	09/14/17 15:30	SDL	TAL NSH

Client Sample ID: MW7-90-090617

Lab Sample ID: 590-6997-4

Date Collected: 09/06/17 15:50

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			13718	09/11/17 09:28	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1	13717	09/11/17 13:52	NMI	TAL SPK
Dissolved	Filtration	FILTRATION			256156	09/14/17 11:44	MKN	TAL SEA
Dissolved	Prep	200.8			256658	09/19/17 18:03	PAB	TAL SEA
Dissolved	Analysis	200.8 LL		1	256731	09/20/17 10:03	FCW	TAL SEA
Total/NA	Prep	200.8			256669	09/20/17 08:41	MKN	TAL SEA
Total/NA	Analysis	200.8 LL		1	256833	09/20/17 21:48	FCW	TAL SEA
Total/NA	Prep	245.1			13787	09/14/17 09:38	JSP	TAL SPK
Total/NA	Analysis	245.1		1	13800	09/14/17 14:55	JSP	TAL SPK
Total/NA	Prep	SM 4500 CN I			459906	09/14/17 11:07	LDT	TAL NSH
Total/NA	Analysis	SM 4500 CN I		1	460011	09/14/17 15:31	SDL	TAL NSH

Client Sample ID: MW4-20-090617

Lab Sample ID: 590-6997-5

Date Collected: 09/06/17 16:40

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			13718	09/11/17 09:28	NMI	TAL SPK
Total/NA	Analysis	8270D SIM		1	13717	09/11/17 14:19	NMI	TAL SPK
Dissolved	Filtration	FILTRATION			256156	09/14/17 11:44	MKN	TAL SEA
Dissolved	Prep	200.8			256658	09/19/17 18:03	PAB	TAL SEA
Dissolved	Analysis	200.8 LL		1	256731	09/20/17 10:07	FCW	TAL SEA
Total/NA	Prep	200.8			256669	09/20/17 08:41	MKN	TAL SEA
Total/NA	Analysis	200.8 LL		1	256833	09/20/17 21:51	FCW	TAL SEA
Total/NA	Prep	245.1			13787	09/14/17 09:38	JSP	TAL SPK
Total/NA	Analysis	245.1		1	13800	09/14/17 14:58	JSP	TAL SPK
Total/NA	Prep	SM 4500 CN I			459906	09/14/17 11:07	LDT	TAL NSH
Total/NA	Analysis	SM 4500 CN I		1	460011	09/14/17 15:32	SDL	TAL NSH

Client Sample ID: MW20-60-090617

Lab Sample ID: 590-6997-6

Date Collected: 09/06/17 17:05

Matrix: Water

Date Received: 09/07/17 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			13718	09/11/17 09:28	NMI	TAL SPK

Lab Chronicle

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Client Sample ID: MW20-60-090617
Date Collected: 09/06/17 17:05
Date Received: 09/07/17 09:00

Lab Sample ID: 590-6997-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270D SIM		1	13717	09/11/17 14:45	NMI	TAL SPK
Dissolved	Filtration	FILTRATION			256156	09/14/17 11:44	MKN	TAL SEA
Dissolved	Prep	200.8			256658	09/19/17 18:03	PAB	TAL SEA
Dissolved	Analysis	200.8 LL		1	256731	09/20/17 10:10	FCW	TAL SEA
Total/NA	Prep	200.8			256669	09/20/17 08:41	MKN	TAL SEA
Total/NA	Analysis	200.8 LL		1	256833	09/20/17 21:55	FCW	TAL SEA
Total/NA	Prep	245.1			13787	09/14/17 09:38	JSP	TAL SPK
Total/NA	Analysis	245.1		1	13800	09/14/17 15:00	JSP	TAL SPK
Total/NA	Prep	SM 4500 CN I			459906	09/14/17 11:07	LDT	TAL NSH
Total/NA	Analysis	SM 4500 CN I		1	460011	09/14/17 15:33	SDL	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-18

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: TestAmerica Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-17
A2LA	ISO/IEC 17025		0453.07	12-31-17
Alaska (UST)	State Program	10	UST-087	01-01-18
Arizona	State Program	9	AZ0473	05-05-18
Arkansas DEQ	State Program	6	88-0737	04-25-18
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-17
Florida	NELAP	4	E87358	06-30-18
Georgia	State Program	4	E87358(FL)/453.07(A2LA)	12-31-17
Illinois	NELAP	5	200010	12-09-17
Iowa	State Program	7	131	04-01-18
Kansas	NELAP	7	E-10229	10-31-17
Kentucky (UST)	State Program	4	19	06-30-18
Kentucky (WW)	State Program	4	90038	12-31-17
Louisiana	NELAP	6	30613	06-30-18
Maine	State Program	1	TN00032	11-03-17
Maryland	State Program	3	316	03-31-18
Massachusetts	State Program	1	M-TN032	06-30-18
Minnesota	NELAP	5	047-999-345	12-31-17
Mississippi	State Program	4	N/A	06-30-18
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-17
New Jersey	NELAP	2	TN965	06-30-18
New York	NELAP	2	11342	03-31-18
North Carolina (WW/SW)	State Program	4	387	12-31-17
North Dakota	State Program	8	R-146	06-30-18
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-17 *
Oregon	NELAP	10	TN200001	04-27-18
Pennsylvania	NELAP	3	68-00585	06-30-18
Rhode Island	State Program	1	LAO00268	12-30-17
South Carolina	State Program	4	84009 (001)	02-28-18
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-17 *
Virginia	NELAP	3	460152	06-14-18
Washington	State Program	10	C789	07-19-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Laboratory: TestAmerica Nashville (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
West Virginia DEP	State Program	3	219	02-28-18
Wisconsin	State Program	5	998020430	08-31-17 *
Wyoming (UST)	A2LA	8	453.07	12-31-17

Laboratory: TestAmerica Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-18
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-05-17
US Fish & Wildlife	Federal		LE058448-0	10-31-18
USDA	Federal		P330-14-00126	02-10-20
Washington	State Program	10	C553	02-17-18

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Landau & Associates, Inc.
Project/Site: Avista Hamilton St. Bridge

TestAmerica Job ID: 590-6997-1

Method	Method Description	Protocol	Laboratory
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
200.8 LL	Metals (ICP/MS)	EPA	TAL SEA
245.1	Mercury (CVAA)	EPA	TAL SPK
SM 4500 CN I	Cyanide, Weak Acid Dissociable	SM	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200