AECOM
111 SW Columbia Street
Suite 1500
Portland, OR 97201
www.aecom.com

503 222 7200 tel
503 222 4292 fax

May 13, 2016

Env-Agency Correspondence
CONSENT DECREE 99-2-07176-0SEA
PROGRESS REPORT

Mr. Jerome Cruz
Washington Department of Ecology
Northwest Region Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Dear Mr. Cruz:

AECOM, on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), submits the following progress report for the Seattle Terminal MTCA remedial action in accordance with Consent Decree No. 99-2-07176-0SEA Section XI. This progress report covers the period from January 1, 2016 through March 31, 2016.

A. List of Activities That Have Taken Place During the Reporting Period

- Quarterly groundwater monitoring activities were conducted in association with the quarterly groundwater monitoring event from February 22, 2016 through February 23, 2016. Wells sampled included MW-301, MW-307, MW-308, MW-310 through MW-312, and TX-03A. A summary of the data in the wells located in the TX-03A Area is included in Table 1. The laboratory data is included in Attachment A.

- A gauging event at monitoring wells MW-101, MW-102, MW-201 through MW-204, MW-206A, MW-301 through MW-304, MW-307 through MW-312, TES-MW-1 and TX-03A was conducted on February 23, 2016.

- Monitoring wells MW-208, and MW-210 through MW-212, in the Shoreline Manifold Area, were gauged for water levels and monitored for free product on February 23, 2016. The absorbent socks were replaced in wells MW-210 and MW-212 during the event. Measurable free product was recorded at MW-210 at 0.59 feet during the February shoreline gauging event.

B. Detailed Description of Any Deviations from Required Tasks Not Otherwise Documented in Project Plans or Amendment Requests

- None

C. Description of All Deviations From Schedule (Section VI, Work to Be Performed: Task 5) During the Reporting Period and Any Planned Deviations in the Upcoming Reporting Period

- None

D. For any Deviations in Schedule, a Plan for Recovery Lost Time and Maintaining Compliance with Schedule

- None

E. All Raw Data (including laboratory analysis) Received by Shell During the Past Quarter and an A List of Deliverables for the Upcoming Reporting Period if Different from the Schedule Identification of the Source of the Sample.

- The laboratory data for the groundwater monitoring event conducted in February 2016 is attached. Groundwater samples were analyzed for the following:
    - volatile organic compounds benzene, toluene, ethylbenzene and xylene
    - total petroleum hydrocarbons (TPH) as gasoline

A data validation report is attached (Attachment A).

F. A List of Deliverables for the Upcoming Reporting Period if Different from the Schedule

- 2015 Annual Compliance Monitoring Report

G. A List of Deliverables in Review with Washington State Ecology or Other Agency

- A Draft Shell Harbor Island Terminal, Storm Water System Pipe Repair Work Plan has been submitted to the City of Seattle on August 7, 2015. The City of Seattle has come back to Shell with a Voluntary Compliance Agreement. All parties have signed the agreement. A Draft Storm Water System Pipe Repair Work Plan was submitted to Ecology on January 26, 2016 and Ecology has not provided approval of the Work Plan.

- Air Sparge System Installation Work Plan – TX03A Area – Plan currently with Ecology, waiting for review and comments.

If you have any questions regarding this progress report, please call Nicky Moody at (503) 222-7200.

Sincerely,

ON BEHALF OF

Nicky Moody
Project Manager

cc: Andrea Wing – Shell Oil Products US
Paul Katz, Seattle Terminal Manager – Shell Oil Products US

Attachments:

Table 1 – TX-03A Groundwater Analytical Results
Attachment A - Data Validation Report and Laboratory Reports

TABLE

Table 1
TX-03A Groundwater Analytical Results
Shell Harbor Island Terminal
Seattle, Washington

Sample location/ TOC Elevation	Sample Date	Depth to Water (ft)	Groundwater Elevation (ft)	Chemical (mg/L)						
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Hydrocarbons	Diesel Range Hydrocarbons	Motor Oil Range Hydrocarbons
Cleanup Level[a]				0.071	200	29	NE	1	10	10
MW-101	10/27/11	12.18	6.03	< 0.0010	< 0.0010	< 0.0010	< 0.0020	0.0936	< 0.10	NA
18.21	11/26/12	9.95	8.26	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.188 j	0.0937 j	< 0.10
	02/21/13	10.24	7.97	NA	NA	NA	NA	NA	NA	NA
	05/16/13	10.89	7.32	NA	NA	NA	NA	NA	NA	NA
	09/06/13	11.99	6.22	NA	NA	NA	NA	NA	NA	NA
	11/06/13	11.78	6.43	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.118 j	< 0.048	< 0.095
	04/22/14	10.16	8.05	NA	NA	NA	NA	NA	NA	NA
	11/04/14	10.70	7.51	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.0048	< 0.0095
	03/10/15	10.31	7.90	NA	NA	NA	NA	NA	NA	NA
	05/19/15	10.03	8.18	NA	NA	NA	NA	NA	NA	NA
	07/29/15	11.86	6.35	NA	NA	NA	NA	NA	NA	NA
	12/09/15	9.12	9.09	< 0.0000320	< 0.0000380	< 0.0000860	< 0.0000160	0.0914 J	0.129	< 0.0603
	02/23/16	8.81	9.40	NA	NA	NA	NA	NA	NA	NA
MW-102	10/26/11	9.59	6.01	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.113	NA
15.60	11/28/12	7.08	8.52	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050 uj	< 0.050	NA
	02/21/13	7.88	7.72	NA	NA	NA	NA	NA	NA	NA
	05/16/13	8.40	7.20	NA	NA	NA	NA	NA	NA	NA
	09/06/13	9.36	6.24	NA	NA	NA	NA	NA	NA	NA
	11/07/13	9.18	6.42	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.047	0.144 j
	04/22/14	7.69	7.91	NA	NA	NA	NA	NA	NA	NA
	11/04/14	7.91	7.69	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0568 J	< 0.094
	03/10/15	7.90	7.70	NA	NA	NA	NA	NA	NA	NA
	05/19/15	8.47	7.13	NA	NA	NA	NA	NA	NA	NA
	07/29/15	9.39	6.21	NA	NA	NA	NA	NA	NA	NA
	12/08/15	6.53	9.07	< 0.0000320	0.0000694 J	< 0.0000860	< 0.0000160	< 0.0520	0.188 J	< 0.0116
	02/23/16	6.78	8.82	NA	NA	NA	NA	NA	NA	NA
MW-201	11/27/12	13.10	7.08	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.122	< 0.10
20.18	02/21/13	13.74	6.44	NA	NA	NA	NA	NA	NA	NA
	05/16/13	14.45	5.73	NA	NA	NA	NA	NA	NA	NA
	09/06/13	14.78	5.40	NA	NA	NA	NA	NA	NA	NA
	11/06/13	14.7	5.48	< 0.00020	< 0.00020	< 0.00020	< 0.00046	0.0964 j	0.52	< 0.094
	04/22/14	13.42	6.76	NA	NA	NA	NA	NA	NA	NA
	11/06/14	13.65	6.53	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.173	0.195
	03/10/15	13.64	6.54	NA	NA	NA	NA	NA	NA	NA
	05/19/15	14.34	5.84	NA	NA	NA	NA	NA	NA	NA
	07/29/15	14.65	5.53	NA	NA	NA	NA	NA	NA	NA
	12/10/15	12.23	7.95	< 0.0000320	< 0.0000380	0.000270 J	< 0.0000160	0.121	0.323	0.171 J
	02/23/16	12.33	7.85	NA	NA	NA	NA	NA	NA	NA
MW-202	10/26/11	14.53	5.33	NA	NA	NA	NA	**4.3**	1.02	NA
19.86	03/01/12	13.6	6.26	0.0053	0.0019	0.0107	0.0013 j	**3.87**	NA	NA
	06/13/12	13.75	6.11	NA	NA	NA	NA	**3.31**	1.54	NA
	09/26/12	14.42	5.44	0.0058	0.0029 j	0.0378	< 0.0018	**4.07**	NA	NA
	11/27/12	13.09	6.77	0.0113	0.0034	0.0274	0.0022	**6.07**	2.67	< 0.30
	02/21/13	13.27	6.59	NA	NA	NA	NA	NA	NA	NA
	05/15/13	13.80	6.06	NA	NA	NA	NA	**3.83**	1.62	< 0.19
	09/06/13	14.38	5.48	NA	NA	NA	NA	NA	NA	NA
	11/06/13	14.25	5.61	< 0.00020	0.0027	0.0335	0.0012 j	**4.68**	1.29	< 0.095
	04/22/14	13.23	6.63	NA	NA	NA	NA	**3.22**	2.18	< 0.28
	11/06/14	13.44	6.42	0.0083	0.0026	0.0154	0.0011	**5.10**	2.45	0.282 J
	03/10/15	13.23	6.63	NA	NA	NA	NA	NA	NA	NA
	05/19/15	13.76	6.10	NA	NA	NA	NA	**2.96**	0.842	< 0.096
	07/29/15	14.18	5.68	NA	NA	NA	NA	NA	NA	NA
	12/10/15	12.76	7.10	0.00419	0.00124	0.00277	0.00104 J	5.67	27.200	0.565
	02/23/16	12.15	7.71	NA	NA	NA	NA	NA	NA	NA
MW-203	10/26/11	8.53	5.46	NA	NA	NA	NA	**1.38**	0.262	NA
13.99	06/13/12	7.70	6.29	NA	NA	NA	NA	0.459	0.134	NA
	11/27/12	7.25	6.74	NA	NA	NA	NA	**1.05**	0.0943 j	< 0.10
	02/21/13	7.26	6.73	NA	NA	NA	NA	NA	NA	NA
	05/15/13	7.80	6.19	NA	NA	NA	NA	0.144 j	< 0.048	< 0.19
	09/06/13	8.37	5.62	NA	NA	NA	NA	NA	NA	NA
	11/06/13	8.27	5.72	NA	NA	NA	NA	0.680	< 0.047	< 0.094
	04/22/14	7.33	6.66	NA	NA	NA	NA	0.164	0.210 j	0.732 j
	11/06/14	7.59	6.40	NA	NA	NA	NA	0.102	0.0933 J	0.168 J
	03/10/15	6.70	7.29	NA	NA	NA	NA	NA	NA	NA
	05/19/15	7.74	6.25	NA	NA	NA	NA	0.285	0.166	0.170 J
	07/29/15	8.18	5.81	NA	NA	NA	NA	NA	NA	NA
	12/09/15	6.83	7.16	NA	NA	NA	NA	0.0561 J	0.319	0.168 J
	02/23/16	5.92	8.07	NA	NA	NA	NA	NA	NA	NA

Table 1
TX-03A Groundwater Analytical Results
Shell Harbor Island Terminal
Seattle, Washington

Sample location/ TOC Elevation	Sample Date	Depth to Water (ft)	Groundwater Elevation (ft)	Chemical (mg/L)						
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Hydrocarbons	Diesel Range Hydrocarbons	Motor Oil Range Hydrocarbons
Cleanup Level[a]				0.071	200	29	NE	1	10	10
MW-204	11/27/12	10.81	6.46	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.975	< 0.10
17.27	02/21/13	10.81	6.46	NA	NA	NA	NA	NA	NA	NA
	05/16/13	11.30	5.97	NA	NA	NA	NA	NA	NA	NA
	09/06/13	11.77	5.50	NA	NA	NA	NA	NA	NA	NA
	11/06/13	11.71	5.56	0.00057 j	< 0.00020	< 0.00020	< 0.00046	0.0762 j	0.28	0.0976 j
	04/22/14	10.78	6.49	NA	NA	NA	NA	NA	NA	NA
	11/06/14	11.04	6.23	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.505	0.321
	03/10/15	10.75	6.52	NA	NA	NA	NA	NA	NA	NA
	05/19/15	11.21	6.06	NA	NA	NA	NA	NA	NA	NA
	07/29/15	11.59	5.68	NA	NA	NA	NA	NA	NA	NA
	12/10/15	9.91	7.36	< 0.0000320	< 0.0000380	< 0.0000860	< 0.0000160	< 0.0520	0.579	0.213 J
	02/23/16	9.67	7.60	NA	NA	NA	NA	NA	NA	NA
MW-206A	10/26/11	10.31	5.59	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	0.141	NA
15.90	11/27/12	9.05	6.85	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.116	0.111 j
	02/21/13	9.04	6.86	NA	NA	NA	NA	NA	NA	NA
	05/16/13	8.44	7.46	NA	NA	NA	NA	NA	NA	NA
	09/06/13	10.06	5.84	NA	NA	NA	NA	NA	NA	NA
	11/06/13	10.04	5.86	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.047	< 0.094
	04/22/14	9.01	6.89	NA	NA	NA	NA	NA	NA	NA
	11/06/14	9.25	6.65	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.236	0.392
	03/10/15	9.03	6.87	NA	NA	NA	NA	NA	NA	NA
	05/19/15	9.49	6.41	NA	NA	NA	NA	NA	NA	NA
	07/29/15	9.99	5.91	NA	NA	NA	NA	NA	NA	NA
	12/08/15	8.36	7.54	< 0.0000320	< 0.0000380	< 0.0000860	< 0.0000160	< 0.0520	0.226 J	0.139 J
	02/23/16	8.09	7.81	NA	NA	NA	NA	NA	NA	NA
MW-301	11/08/11	6.91	5.62	**0.174**	0.012	0.0098	0.011	**2.77**	0.274	NA
12.56	03/01/12	5.98	6.58	**0.24**	0.0138	0.0099	0.0212	**3.37**	NA	NA
	06/12/12	6.08	6.48	**0.57**	0.0156	0.0183	0.0244	**4.18**	NA	NA
	09/25/12	6.83	5.73	**0.333**	0.0131	0.0186	0.0192	**4.02**	NA	NA
	11/28/12	5.32	7.24	**0.241**	0.0099	0.0125	0.0106	**2.76**	NA	NA
	02/21/13	5.66	6.90	**0.659**	0.0175	0.0264	0.0173 j	**3.98**	0.315	< 0.10
	05/15/13	6.14	6.42	**0.357**	0.0122	0.0231	0.0145	**3.63**	NA	NA
	09/06/13	6.71	5.85	NA	NA	NA	NA	NA	NA	NA
	11/4/13	6.60	5.96	**0.160**	0.0097	0.0164	0.0109	**2.29**	NA	NA
	4/23/14	5.56	7.00	**0.252**	0.0072	0.0135	0.0075 j	**3.57**	NA	NA
	7/24/14	6.38	6.18	**0.314**	0.008	0.0143	0.0096	**3.7**	0.361	< 0.094
	9/23/14	6.71	5.85	**0.184**	0.0056	0.0073	0.0061	**2.85**	0.372	< 0.094
	11/03/14	5.73	6.83	**0.108**	0.0043 J	0.0046 J	0.0051 J	**1.76**	NA	NA
	03/09/15	5.64	6.92	**0.222**	0.0067	0.0065	0.0062 J	**2.27**	NA	NA
	05/21/15	6.10	6.46	**0.194**	0.0069	0.0100	0.0060 J	**2.24**	NA	NA
	07/29/15	6.63	5.93	**0.116**	0.0036	0.0037	0.0019 J	**2.09**	NA	NA
	12/10/15	4.57	7.99	**0.044**	0.0035	0.0010	0.0055	**1.34**	NA	NA
	02/22/16	4.50	8.06	**0.280**	0.00881	0.0104	0.00746	**3.650**	NA	NA
MW-302	11/08/11	7.29	5.56	**0.787**	0.0187	0.156	0.149	**5.46**	0.721	NA
12.85	03/01/12	6.4	6.45	**0.831**	0.0275	0.213	0.248	**5.33**	NA	NA
	06/28/12	6.58	6.27	**1.23**	0.0437	0.403	0.289	**5.65**	NA	NA
	09/25/12	7.21	5.64	**0.657**	0.0247	0.180	0.106	**4.07**	NA	NA
	11/25/12	5.93	6.92	**0.449**	0.0152	0.191	0.177	**4.58**	NA	NA
	02/22/13	6.10	6.75	**0.393**	0.0149	0.124	0.116	**4.15**	0.435	< 0.10
	05/14/13	6.61	6.24	**0.873**	0.0231	0.236	0.145	**4.19**	NA	NA
	09/05/13	7.11	5.74	**0.783**	0.0189	0.162	0.0746	**3.70**	NA	NA
	11/5/13	6.99	5.86	**0.607**	0.0112	0.977	0.0529	**2.69**	NA	NA
	4/23/14	6.09	6.76	**0.98**	0.0269	0.276	0.232	**5.86**	NA	NA
	7/24/14	6.85	6.00	**0.656**	0.0206	0.178	0.131	**4.66**	0.363	< 0.094
Duplicate	7/24/14	6.85	6.00	**0.681**	0.0242	0.207	0.162	**4.68**	0.500	< 0.094
	9/23/14	7.13	5.72	**0.461**	0.014	0.0598	0.0518	**3.26**	0.358	< 0.094
	11/03/14	6.28	6.57	**0.506**	0.0159	0.221	0.176	**4.06**	0.361	< 0.094
	03/10/15	6.22	6.63	NA	NA	NA	NA	NA	NA	NA
	05/21/15	6.60	6.25	0.454	0.0161	0.174	0.150	3.44	NA	NA
	07/29/15	7.07	5.78	NA	NA	NA	NA	NA	NA	NA
	12/10/15	5.12	7.73	0.372	0.00853	0.0139	0.0176	2.16	1	< 0.117
	02/23/16	5.23	7.62	NA	NA	NA	NA	NA	NA	NA
MW-303	11/08/11	6.93	5.71	**1.37**	0.0358	0.295	0.11	**8.57**	0.799	NA
12.64	03/01/12	4.94	7.70	**3.13**	0.0759	0.76	0.232	**12.3**	NA	NA
	06/13/12	6.06	6.58	**2.90**	0.0957	0.884	0.268	**12.5**	NA	NA
	09/25/12	6.84	5.80	**1.83**	0.0635	0.474	0.146	**9.14**	NA	NA
	11/28/12	5.20	7.44	**1.94**	0.0873	1.18	0.319	**12.6**	NA	NA
	02/21/13	5.58	7.06	**2.34**	0.0955	1.29	0.338	**12.8**	0.674	< 0.10
	05/16/13	6.10	6.54	**1.90**	0.0864	0.983	0.272	**10.6**	NA	NA
	09/06/13	6.80	5.84	NA	NA	NA	NA	NA	NA	NA
	11/4/2013	6.61	6.03	**0.884**	0.0278	0.219	0.0544	**6.11**	NA	NA
	4/23/14	5.49	7.15	**1.58**	0.071	**1.14**	0.224	**11.8**	NA	NA
	7/24/14	6.44	6.20	**0.808**	0.0471	0.653	0.161	**9.76**	0.622	< 0.094
	9/23/14	6.80	5.84	NA	NA	NA	NA	NA	NA	NA
	11/04/14	5.73	6.91	**1.42**	0.0618	0.924	0.180	**11.5**	1.00	1.15
	03/10/15	5.62	7.02	NA	NA	NA	NA	NA	NA	NA
	05/20/15	6.11	6.53	0.669	0.0432	0.713	0.157	7.90	NA	NA
	07/29/15	6.71	5.93	NA	NA	NA	NA	**NA**	NA	NA
	12/08/15	4.38	8.26	1.190	0.0710	1.330	0.247 J	**7.60**	2.45	< 0.120
	02/23/16	4.44	8.20	NA	NA	NA	NA	NA	NA	NA

Table 1
TX-03A Groundwater Analytical Results
Shell Harbor Island Terminal
Seattle, Washington

Sample location/ TOC Elevation	Sample Date	Depth to Water (ft)	Groundwater Elevation (ft)	Chemical (mg/L)						
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Hydrocarbons	Diesel Range Hydrocarbons	Motor Oil Range Hydrocarbons
Cleanup Level[a]				0.071	200	29	NE	1	10	10
MW-304	11/08/11	7.01	5.69	**0.74**	0.0164	0.0723	0.0652	**4.24**	0.675	NA
12.70	03/01/12	6.06	6.64	**0.686**	0.0351	0.214	0.264	**5.64**	NA	NA
	06/12/12	6.20	6.50	**1.04**	0.0408	0.270	0.218	**5.98**	NA	NA
	09/25/12	6.96	5.74	**0.630**	0.0240	0.198	0.105	**3.93**	NA	NA
	11/28/12	5.41	7.29	**0.411**	0.0244	0.306	0.252	**5.89**	NA	NA
	02/22/13	5.78	6.92	**0.507**	0.0225	0.208	0.149	**5.56**	0.762	0.186 j
	05/16/13	NA	NA	**0.645**	0.0283	0.209	0.144	**4.73**	NA	NA
	09/05/13	6.89	5.81	**0.862**	0.0188	0.0849	0.0616	**3.09**	NA	NA
	11/5/13	6.75	5.95	**0.695**	0.0163	0.0629	0.054	**2.67**	NA	NA
	4/23/14	5.67	7.03	**0.778**	0.0248	0.185	0.147	**5.93**	NA	NA
	7/24/14	6.57	6.13	**0.437**	0.0173	0.109	0.0666	**3.59**	0.557	< 0.094
	9/23/14	6.89	5.81	NA	NA	NA	NA	NA	NA	NA
	11/03/14	5.91	6.79	**1.11**	0.0421	0.48	0.2140	**3.32**	0.366	< 0.094
	03/10/15	5.80	6.90	NA	NA	NA	NA	NA	NA	NA
	05/20/15	6.28	6.42	**0.486**	0.0136	0.115	0.0373	**3.30**	NA	NA
	07/29/15	6.84	5.86	NA	NA	NA	NA	NA	NA	NA
	12/10/15	4.80	7.90	0.775	0.0312	0.336	0.1140	4.37	1.55	< 0.116
	02/23/13	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-307	11/26/12	7.95	7.67	**2.15**	0.0858	0.833	0.513	**10.9**	NA	NA
15.62	02/22/13	8.42	7.20	**0.497**	0.0358	0.226	0.145	**6.02**	0.604	< 0.094
	05/15/13	8.91	6.71	**0.437**	0.0461	0.167	0.120	**4.56**	NA	NA
	09/05/13	9.67	5.95	**0.643**	0.0645 j	0.154	0.131	**5.30**	NA	NA
	11/06/13	9.49	6.13	**0.568**	0.0448	0.104	0.0912	**4.39**	NA	NA
	04/22/14	8.26	7.36	**0.520**	0.0408	0.241	0.152	**5.68**	NA	NA
	11/04/14	8.52	7.10	**0.596**	0.0390	0.176	0.095	**5.16**	0.632	< 0.095
	03/09/15	8.42	7.20	**0.444**	0.0358	0.271	0.104	**5.41**	NA	NA
	05/19/15	8.92	6.70	**0.306**	0.0273	0.140	0.067	**3.44**	0.479	< 0.096
	07/29/15	9.58	6.04	**0.298**	0.0245	0.109	0.0434	**4.09**	NA	NA
	12/09/15	7.33	8.29	**0.699**	0.0585	0.334	0.1310	**5.03**	1.63	< 0.118
	02/23/16	7.24	8.38	**0.498**	0.0417	0.578	0.110 J	**4.980**	NA	NA
MW-308	11/26/12	7.90	7.69	**0.144**	0.0010 j	0.0072	0.0013 j	0.778	NA	NA
15.59	02/22/13	8.22	7.37	**0.668**	0.0078 j	0.0443	0.0059 j	**3.48**	0.354	< 0.10
	05/15/13	8.80	6.79	**0.392**	0.0052 j	0.0427	< 0.0046	**2.54**	NA	NA
	09/06/13	9.56	6.03	NA	NA	NA	NA	NA	NA	NA
	11/06/13	9.45	6.14	**0.237**	0.0033 j	0.0056	0.0026 j	**1.65**	NA	NA
	04/22/14	8.10	7.49	**0.0165**	< 0.00020	0.00036 j	< 0.00046	**0.146**	NA	NA
	11/04/14	8.40	7.19	**0.132**	0.0012	0.0044	0.00058	0.782	< 0.048	< 0.095
	03/09/15	8.31	7.28	**0.121 J**	0.0020	0.00064 J	0.0013 J	**1.10**	NA	NA
	05/19/15	9.01	6.58	**0.213**	0.0013 J	< 0.00050	< 0.0012	0.973	NA	NA
	07/29/15	9.62	5.97	**0.242**	0.0017 J	0.0014 J	< 0.0012	**1.77**	NA	NA
	12/09/15	6.15	9.44	**0.146**	< 0.00361	0.02840	0.0053	**1.19**	NA	NA
	02/23/16	6.88	8.71	0.00711	< 0.0000380	0.000101 J	< 0.0000160	0.0619	NA	NA
MW-309	11/28/12	5.38	7.29	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
12.67	02/21/13	5.73	6.94	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0790 j	< 0.10
	05/17/13	6.21	6.46	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
	09/06/13	6.84	5.83	NA	NA	NA	NA	NA	NA	NA
	11/06/13	6.76	5.91	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
	04/23/14	5.60	7.07	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
	07/24/14	6.47	6.20	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.102	< 0.094
	09/23/14	6.81	5.86	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	0.0751	< 0.095
	11/03/14	5.81	6.86	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095
	03/10/15	5.72	6.95	NA	NA	NA	NA	NA	NA	NA
	05/20/15	6.18	6.49	< 0.00020	< 0.00020	0.00027 J	< 0.00046	0.0542 J	NA	NA
	07/29/15	6.74	5.93	NA	NA	NA	NA	NA	NA	NA
	12/08/15	4.59	8.08	< 0.0000320	< 0.0000380	< 0.0000860	< 0.0000160	< 0.0520	< 0.0805	< 0.121
	02/23/16	4.70	7.97	NA	NA	NA	NA	NA	NA	NA
MW-310	11/28/12	6.40	7.12	**0.86**	0.0265	0.211	0.147	**5.74**	NA	NA
13.51	02/21/13	6.78	6.73	**1.8**	0.0768	0.506	0.18	**8.37**	0.603	< 0.10
	05/14/13	7.20	6.31	**0.993**	0.0703	0.654	0.175	**6.49**	NA	NA
	09/05/13	7.72	5.79	**0.960**	0.0598	0.310	0.110	**5.51**	NA	NA
	11/05/13	7.61	5.90	**0.772**	0.0409	0.226	0.0846	**4.92**	NA	NA
	04/23/14	6.64	6.87	**0.796**	0.0432	0.187	0.0607	**5.88**	NA	NA
	07/24/14	7.43	6.08	**0.920**	0.0489	0.368	0.0647	**6.36**	0.605	< 0.094
	09/23/14	7.73	5.78	**--**	--	--	--	--	--	--
	11/04/14	6.84	6.67	**0.739**	0.0387	0.132	0.0538	**5.15**	0.613	< 0.094
	03/09/15	6.78	6.73	**0.736**	0.0475	0.189	0.0606	**4.71**	NA	NA
	05/21/15	7.19	6.32	**0.641**	0.0464	0.169	0.0572	**4.39**	NA	NA
	07/29/15	7.67	5.84	**0.714**	0.0428	0.181	0.0488	**3.72**	NA	NA
	12/10/15	5.80	7.71	**0.405**	0.0396	0.077	0.0564	**3.89**	2.75	< 0.117
	02/22/16	5.77	7.74	**0.755**	0.0436	0.303	0.0615	**4.860**	NA	NA
MW-311	11/05/14	8.03	6.88	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095
14.91	03/09/15	8.02	6.89	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
	06/11/15	8.42	6.49	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
	07/29/15	8.83	6.08	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	NA	NA
	12/10/15	7.08	7.83	< 0.0000320	< 0.000380	< 0.0000860	< 0.0000160	< 0.0520	NA	NA
	02/22/16	6.97	7.94	< 0.0000320	< 0.0000380	< 0.0000860	< 0.0000160	< 0.0178	NA	NA
MW-312	11/05/14	7.58	6.73	**0.239**	0.0058	0.0065	0.0102	**1.64**	1.13	0.132 J
14.31	03/09/15	7.56	6.75	**0.357**	0.0044 J	0.0086	0.0050 J	**1.91**	NA	NA
	06/11/15	7.95	6.36	**0.204**	0.0034 J	0.0023 J	0.0027 J	**1.35**	NA	NA
	07/29/15	8.34	5.97	**0.313**	0.0041 J	0.0030 J	0.0032 J	**1.65**	NA	NA
	12/10/15	6.97	7.34	**0.072**	0.0033	0.0022	0.0046	**1.26**	NA	NA
	02/23/16	6.68	7.63	**0.327**	0.00354	0.00759	0.00416	**1.960**	NA	NA

Table 1
TX-03A Groundwater Analytical Results
Shell Harbor Island Terminal
Seattle, Washington

Sample location/ TOC Elevation	Sample Date	Depth to Water (ft)	Groundwater Elevation (ft)	Chemical (mg/L)						
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Gasoline Range Hydrocarbons	Diesel Range Hydrocarbons	Motor Oil Range Hydrocarbons
Cleanup Level[a]				0.071	200	29	NE	1	10	10
TES-MW-1	10/26/11	10.45	5.59	< 0.0010	< 0.0010	< 0.0010	< 0.0020	< 0.20	< 0.10	< 0.20
16.15	11/26/12	8.62	7.53	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.050	< 0.10
	05/16/13	9.46	6.69	NA	NA	NA	NA	NA	NA	NA
	11/06/13	10.06	6.09	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095
	04/22/14	8.70	7.45	NA	NA	NA	NA	NA	NA	NA
	11/04/14	9.07	7.08	< 0.00020	< 0.00020	< 0.00020	< 0.00046	< 0.050	< 0.048	< 0.095
	03/10/15	8.92	7.23	NA	NA	NA	NA	NA	NA	NA
	05/19/15	9.40	6.75	NA	NA	NA	NA	NA	NA	NA
	07/29/15	10.08	6.07	NA	NA	NA	NA	NA	NA	NA
	12/09/15	7.14	9.01	< 0.0000320	< 0.0000380	< 0.0000860	< 0.0000160	< 0.0520	< 0.0779	<0.117
	02/23/16	7.58	8.57	NA	NA	NA	NA	NA	NA	NA
TX-03A	10/27/11	-	-	**3.44**	0.0712	0.147	0.111	**8.51**	NA	NA
12.26	03/01/12	5.84	6.42	**1.74**	0.0261	0.0272	0.0345 j	**5.58**	NA	NA
	06/12/12	5.97	6.29	**1.57**	0.020 j	0.0139 j	0.030 j	**6.78**	NA	NA
	09/25/12	6.66	5.60	**1.70**	0.0298	0.0410	0.0501	**5.53**	NA	NA
	11/28/12	5.20	7.06	**1.18**	0.0188 j	0.0232	0.0357 j	**4.91**	NA	NA
	02/21/13	5.55	6.71	**2.81**	0.0403	0.0421	0.0489 j	**8.2**	0.32	< 0.10
	05/15/13	6.01	6.25	**2.15**	0.0459 j	0.189	0.0643 j	**3.11**	NA	NA
	09/06/13	6.56	5.70	NA	NA	NA	NA	NA	NA	NA
	11/05/13	6.45	5.81	**2.72**	0.0343 j	0.0364 j	0.0411 j	**6.01**	NA	NA
	04/23/14	5.45	6.81	**1.22**	0.0171 j	0.0251	0.027 j	**5.76**	NA	NA
	07/24/14	6.28	5.98	**1.64**	0.0317	0.0698	0.052	**7.55**	0.382	< 0.094
	09/23/14	6.57	5.69	**1.70**	0.0282	0.104	0.0441 j	**6.80**	0.385	< 0.094
	11/04/14	5.64	6.62	**0.941**	0.0137	0.0366	0.0269	**5.76**	0.448	< 0.094
	03/09/15	5.57	6.69	**1.86**	0.0246 J	0.0581	0.0390 J	**7.16**	NA	NA
	05/21/15	5.98	6.28	**1.15**	0.0144 J	0.0462	0.0260 J	**3.40**	NA	NA
	07/29/15	6.51	5.75	**1.720**	0.0213 J	0.118	0.0355 J	**5.42**	NA	NA
	12/10/15	4.48	7.78	**0.635**	0.0126	0.026	0.0253	**3.32**	1.34	< 0.117
	02/22/16	4.44	7.82	**1.780**	0.0274	0.0882	0.0385	**5.170**	NA	NA

Notes:
Bolded values indicate concentrations exceeding the associated Cleanup Level.
< = concentration undetected at the method detection limit.
[a] Cleanup levels per the Cleanup Action Plan (Ecology, 1998).
aj = Diesel pattern is not present; higher boiling gasoline compounds in Diesel range.
ft = feet
j/J = Laboratory qualifier; indicates an estimated value
mg/L = milligrams per liter
NA = Not Analyzed
NE = Not Established
TOC = Top of Casing
uj = The analyte was not detected above the sample method detection limit; however, the method detection limit is approximate.
-- = Not Applicable, Not Available

ATTACHMENT A

Data Validation Report and Laboratory Reports

Final Data Review

The data quality review of 7 primary groundwater samples and one trip blank collected February 22 and February 23, 2015, at the Harbor Island site in Seattle, Washington has been completed. Samples were submitted to TestAmerica (TA) of Spokane, Washington. The samples submitted were analyzed for one or more of the following: benzene, toluene, ethylbenzene, xylene (BTEX; EPA Method 8260C), and volatile petroleum products (gasoline; Method NWTPH-Gx).

The review included the analytical data presented in TA report 590-2875-1. The data were reviewed based on *National Functional Guidelines for Superfund Organic Methods Data Review* (EPA, 2014) and laboratory quality control criteria. Items reviewed included: chain-of-custody (COC) records, hold times, surrogate recoveries, laboratory control results, and method blank results. No data qualifiers were assigned as a result of this review.

The following criteria were evaluated during the review:

- COC Records – Acceptable
- Temperature – Acceptable with the following note:

The samples were received by the laboratory above the recommended temperature of ≤ 6 degrees Celsius (ºC) at 6.7 ºC. As the cooler temperature only marginally exceeded the recommended temperature no bias is expected in the sample results; no qualification is necessary.

- Preservation – Acceptable
- Hold Times – Acceptable
- Method Blanks – Acceptable
- Trip Blanks - Acceptable
- Surrogates – Acceptable
- Laboratory Control Samples (LCS) – Acceptable
- Reporting Limits – Acceptable

Overall Assessment of Data

The completeness of the analytical reports for this quarter laboratory analysis is 100%. The usefulness of the data is based on the USEPA guidance documents referenced in the introduction of this report. Upon consideration of the information presented above, the data are considered usable.

Data Qualifier Definitions

U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria.

DNR Do Not Report. Another result is available that is more reliable.

References

EPA, 2014. National Functional Guidelines for Superfund Organic Methods Data Review. August.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

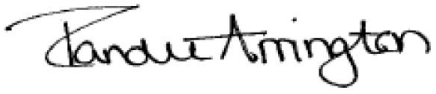
ANALYTICAL REPORT

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

TestAmerica Job ID: 590-2875-1
TestAmerica Sample Delivery Group: 60411076
Client Project/Site: 2555 13th Avenue, Seattle (60411076)

For:
AECOM, Inc.
111 SW Columbia Street, Suite 1500
Portland, Oregon 97201

Attn: Clifford Pearson



Authorized for release by:
3/3/2016 2:48:48 PM

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

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Case Narrative

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Job ID: 590-2875-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 2/25/2016 1:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.7º C.

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

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

Sample Summary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-2875-1	MW-301	Ground Water	02/22/16 11:15	02/25/16 13:20
590-2875-2	MW-307	Ground Water	02/23/16 08:50	02/25/16 13:20
590-2875-3	MW-308	Ground Water	02/23/16 09:35	02/25/16 13:20
590-2875-4	MW-310	Ground Water	02/22/16 13:35	02/25/16 13:20
590-2875-5	MW-311	Ground Water	02/22/16 14:20	02/25/16 13:20
590-2875-6	MW-312	Ground Water	02/23/16 13:15	02/25/16 13:20
590-2875-7	TX-03A	Ground Water	02/22/16 12:15	02/25/16 13:20
590-2875-8	Trip Blanks	Water	02/22/16 00:00	02/25/16 13:20

Method Summary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

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

Laboratory References:

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

Detection Summary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Client Sample ID: MW-301 — Lab Sample ID: 590-2875-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	280		4.00	0.640	ug/L	20		8260C	Total/NA
Ethylbenzene	10.4		1.00	0.0860	ug/L	1		8260C	Total/NA
m,p-Xylene	7.14		2.00	0.124	ug/L	1		8260C	Total/NA
o-Xylene	0.313	J	1.00	0.0620	ug/L	1		8260C	Total/NA
Toluene	8.81		1.00	0.0380	ug/L	1		8260C	Total/NA
Xylenes, Total	7.46		3.00	0.0160	ug/L	1		8260C	Total/NA
Gasoline	3650		100	17.8	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-307 — Lab Sample ID: 590-2875-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	498		20.0	3.20	ug/L	100		8260C	Total/NA
Ethylbenzene	578		100	8.60	ug/L	100		8260C	Total/NA
m,p-Xylene	110	J	200	12.4	ug/L	100		8260C	Total/NA
Toluene	41.7		1.00	0.0380	ug/L	1		8260C	Total/NA
Xylenes, Total	110	J	300	1.60	ug/L	100		8260C	Total/NA
Gasoline	4980		100	17.8	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-308 — Lab Sample ID: 590-2875-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.11		0.200	0.0320	ug/L	1		8260C	Total/NA
Ethylbenzene	0.101	J	1.00	0.0860	ug/L	1		8260C	Total/NA
Gasoline	61.9	J	100	17.8	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-310 — Lab Sample ID: 590-2875-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	775		20.0	3.20	ug/L	100		8260C	Total/NA
Ethylbenzene	303		100	8.60	ug/L	100		8260C	Total/NA
m,p-Xylene	58.2		2.00	0.124	ug/L	1		8260C	Total/NA
o-Xylene	3.26		1.00	0.0620	ug/L	1		8260C	Total/NA
Toluene	43.6		1.00	0.0380	ug/L	1		8260C	Total/NA
Xylenes, Total	61.5		3.00	0.0160	ug/L	1		8260C	Total/NA
Gasoline	4860		100	17.8	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: MW-311 — Lab Sample ID: 590-2875-5

No Detections.

Client Sample ID: MW-312 — Lab Sample ID: 590-2875-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	327		4.00	0.640	ug/L	20		8260C	Total/NA
Ethylbenzene	7.59		1.00	0.0860	ug/L	1		8260C	Total/NA
m,p-Xylene	3.81		2.00	0.124	ug/L	1		8260C	Total/NA
o-Xylene	0.358	J	1.00	0.0620	ug/L	1		8260C	Total/NA
Toluene	3.54		1.00	0.0380	ug/L	1		8260C	Total/NA
Xylenes, Total	4.16		3.00	0.0160	ug/L	1		8260C	Total/NA
Gasoline	1960		100	17.8	ug/L	1		NWTPH-Gx	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Client Sample ID: TX-03A — Lab Sample ID: 590-2875-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1780		20.0	3.20	ug/L	100		8260C	Total/NA
Ethylbenzene	88.2		1.00	0.0860	ug/L	1		8260C	Total/NA
m,p-Xylene	36.6		2.00	0.124	ug/L	1		8260C	Total/NA
o-Xylene	1.89		1.00	0.0620	ug/L	1		8260C	Total/NA
Toluene	27.4		1.00	0.0380	ug/L	1		8260C	Total/NA
Xylenes, Total	38.5		3.00	0.0160	ug/L	1		8260C	Total/NA
Gasoline	5170		100	17.8	ug/L	1		NWTPH-Gx	Total/NA

Client Sample ID: Trip Blanks — Lab Sample ID: 590-2875-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-301

Date Collected: 02/22/16 11:15
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-1

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	280		4.00	0.640	ug/L			03/02/16 13:13	20
Ethylbenzene	10.4		1.00	0.0860	ug/L			03/01/16 12:32	1
m,p-Xylene	7.14		2.00	0.124	ug/L			03/01/16 12:32	1
o-Xylene	0.313	J	1.00	0.0620	ug/L			03/01/16 12:32	1
Toluene	8.81		1.00	0.0380	ug/L			03/01/16 12:32	1
Xylenes, Total	7.46		3.00	0.0160	ug/L			03/01/16 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 140*		*03/01/16 12:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 140*		*03/02/16 13:13*	*20*
4-Bromofluorobenzene (Surr)	*111*		*68.7 - 141*		*03/01/16 12:32*	*1*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*03/02/16 13:13*	*20*
Dibromofluoromethane (Surr)	*92*		*71.2 - 143*		*03/01/16 12:32*	*1*
Dibromofluoromethane (Surr)	*103*		*71.2 - 143*		*03/02/16 13:13*	*20*
Toluene-d8 (Surr)	*84*		*74.1 - 135*		*03/01/16 12:32*	*1*
Toluene-d8 (Surr)	*99*		*74.1 - 135*		*03/02/16 13:13*	*20*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	3650		100	17.8	ug/L			03/01/16 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*68.7 - 141*		*03/01/16 12:32*	*1*

Client Sample ID: MW-307

Date Collected: 02/23/16 08:50
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-2

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	498		20.0	3.20	ug/L			03/02/16 13:34	100
Ethylbenzene	578		100	8.60	ug/L			03/02/16 13:34	100
m,p-Xylene	110	J	200	12.4	ug/L			03/02/16 13:34	100
o-Xylene	ND		100	6.20	ug/L			03/02/16 13:34	100
Toluene	41.7		1.00	0.0380	ug/L			03/01/16 12:53	1
Xylenes, Total	110	J	300	1.60	ug/L			03/02/16 13:34	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 140*		*03/01/16 12:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 140*		*03/02/16 13:34*	*100*
4-Bromofluorobenzene (Surr)	*123*		*68.7 - 141*		*03/01/16 12:53*	*1*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*03/02/16 13:34*	*100*
Dibromofluoromethane (Surr)	*88*		*71.2 - 143*		*03/01/16 12:53*	*1*
Dibromofluoromethane (Surr)	*100*		*71.2 - 143*		*03/02/16 13:34*	*100*
Toluene-d8 (Surr)	*110*		*74.1 - 135*		*03/01/16 12:53*	*1*
Toluene-d8 (Surr)	*102*		*74.1 - 135*		*03/02/16 13:34*	*100*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	4980		100	17.8	ug/L			03/01/16 12:53	1

Client Sample ID: MW-307

Date Collected: 02/23/16 08:50
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-2

Matrix: Ground Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*123*		*68.7 - 141*		*03/01/16 12:53*	*1*

Client Sample ID: MW-308

Date Collected: 02/23/16 09:35
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-3

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**7.11**		0.200	0.0320	ug/L			03/02/16 13:55	1
Ethylbenzene	**0.101**	**J**	1.00	0.0860	ug/L			03/02/16 13:55	1
m,p-Xylene	ND		2.00	0.124	ug/L			03/02/16 13:55	1
o-Xylene	ND		1.00	0.0620	ug/L			03/02/16 13:55	1
Toluene	ND		1.00	0.0380	ug/L			03/02/16 13:55	1
Xylenes, Total	ND		3.00	0.0160	ug/L			03/02/16 13:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 140*		*03/02/16 13:55*	*1*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*03/02/16 13:55*	*1*
Dibromofluoromethane (Surr)	*100*		*71.2 - 143*		*03/02/16 13:55*	*1*
Toluene-d8 (Surr)	*99*		*74.1 - 135*		*03/02/16 13:55*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**61.9**	**J**	100	17.8	ug/L			03/02/16 13:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*03/02/16 13:55*	*1*

Client Sample ID: MW-310

Date Collected: 02/22/16 13:35
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-4

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**775**		20.0	3.20	ug/L			03/02/16 14:17	100
Ethylbenzene	**303**		100	8.60	ug/L			03/02/16 14:17	100
m,p-Xylene	**58.2**		2.00	0.124	ug/L			03/01/16 13:36	1
o-Xylene	**3.26**		1.00	0.0620	ug/L			03/01/16 13:36	1
Toluene	**43.6**		1.00	0.0380	ug/L			03/01/16 13:36	1
Xylenes, Total	**61.5**		3.00	0.0160	ug/L			03/01/16 13:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 140*		*03/01/16 13:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 140*		*03/02/16 14:17*	*100*
4-Bromofluorobenzene (Surr)	*110*		*68.7 - 141*		*03/01/16 13:36*	*1*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*03/02/16 14:17*	*100*
Dibromofluoromethane (Surr)	*88*		*71.2 - 143*		*03/01/16 13:36*	*1*
Dibromofluoromethane (Surr)	*98*		*71.2 - 143*		*03/02/16 14:17*	*100*
Toluene-d8 (Surr)	*107*		*74.1 - 135*		*03/01/16 13:36*	*1*
Toluene-d8 (Surr)	*100*		*74.1 - 135*		*03/02/16 14:17*	*100*

Client Sample ID: MW-310

Lab Sample ID: 590-2875-4
Date Collected: 02/22/16 13:35
Matrix: Ground Water
Date Received: 02/25/16 13:20

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**4860**		100	17.8	ug/L			03/01/16 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*68.7 - 141*		*03/01/16 13:36*	*1*

Client Sample ID: MW-311

Lab Sample ID: 590-2875-5
Date Collected: 02/22/16 14:20
Matrix: Ground Water
Date Received: 02/25/16 13:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.200	0.0320	ug/L			03/02/16 14:38	1
Ethylbenzene	ND		1.00	0.0860	ug/L			03/02/16 14:38	1
m,p-Xylene	ND		2.00	0.124	ug/L			03/02/16 14:38	1
o-Xylene	ND		1.00	0.0620	ug/L			03/02/16 14:38	1
Toluene	ND		1.00	0.0380	ug/L			03/02/16 14:38	1
Xylenes, Total	ND		3.00	0.0160	ug/L			03/02/16 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 140*		*03/02/16 14:38*	*1*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*03/02/16 14:38*	*1*
Dibromofluoromethane (Surr)	*110*		*71.2 - 143*		*03/02/16 14:38*	*1*
Toluene-d8 (Surr)	*96*		*74.1 - 135*		*03/02/16 14:38*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	17.8	ug/L			03/02/16 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*03/02/16 14:38*	*1*

Client Sample ID: MW-312

Lab Sample ID: 590-2875-6
Date Collected: 02/23/16 13:15
Matrix: Ground Water
Date Received: 02/25/16 13:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**327**		4.00	0.640	ug/L			03/02/16 15:00	20
Ethylbenzene	**7.59**		1.00	0.0860	ug/L			03/01/16 14:18	1
m,p-Xylene	**3.81**		2.00	0.124	ug/L			03/01/16 14:18	1
o-Xylene	**0.358**	**J**	1.00	0.0620	ug/L			03/01/16 14:18	1
Toluene	**3.54**		1.00	0.0380	ug/L			03/01/16 14:18	1
Xylenes, Total	**4.16**		3.00	0.0160	ug/L			03/01/16 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 140*		*03/01/16 14:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 140*		*03/02/16 15:00*	*20*
4-Bromofluorobenzene (Surr)	*119*		*68.7 - 141*		*03/01/16 14:18*	*1*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*03/02/16 15:00*	*20*
Dibromofluoromethane (Surr)	*101*		*71.2 - 143*		*03/01/16 14:18*	*1*
Dibromofluoromethane (Surr)	*104*		*71.2 - 143*		*03/02/16 15:00*	*20*

Client Sample ID: MW-312

Lab Sample ID: 590-2875-6
Matrix: Ground Water
Date Collected: 02/23/16 13:15
Date Received: 02/25/16 13:20

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*84*		*74.1 - 135*		*03/01/16 14:18*	*1*
Toluene-d8 (Surr)	*99*		*74.1 - 135*		*03/02/16 15:00*	*20*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1960		100	17.8	ug/L			03/01/16 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*119*		*68.7 - 141*		*03/01/16 14:18*	*1*

Client Sample ID: TX-03A

Lab Sample ID: 590-2875-7
Matrix: Ground Water
Date Collected: 02/22/16 12:15
Date Received: 02/25/16 13:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1780		20.0	3.20	ug/L			03/02/16 15:21	100
Ethylbenzene	88.2		1.00	0.0860	ug/L			03/01/16 14:40	1
m,p-Xylene	36.6		2.00	0.124	ug/L			03/01/16 14:40	1
o-Xylene	1.89		1.00	0.0620	ug/L			03/01/16 14:40	1
Toluene	27.4		1.00	0.0380	ug/L			03/01/16 14:40	1
Xylenes, Total	38.5		3.00	0.0160	ug/L			03/01/16 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 140*		*03/01/16 14:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 140*		*03/02/16 15:21*	*100*
4-Bromofluorobenzene (Surr)	*115*		*68.7 - 141*		*03/01/16 14:40*	*1*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*03/02/16 15:21*	*100*
Dibromofluoromethane (Surr)	*98*		*71.2 - 143*		*03/01/16 14:40*	*1*
Dibromofluoromethane (Surr)	*100*		*71.2 - 143*		*03/02/16 15:21*	*100*
Toluene-d8 (Surr)	*96*		*74.1 - 135*		*03/01/16 14:40*	*1*
Toluene-d8 (Surr)	*98*		*74.1 - 135*		*03/02/16 15:21*	*100*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	5170		100	17.8	ug/L			03/01/16 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*115*		*68.7 - 141*		*03/01/16 14:40*	*1*

Client Sample ID: Trip Blanks

Lab Sample ID: 590-2875-8
Matrix: Water
Date Collected: 02/22/16 00:00
Date Received: 02/25/16 13:20

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.200	0.0320	ug/L			03/02/16 15:42	1
Ethylbenzene	ND		1.00	0.0860	ug/L			03/02/16 15:42	1
m,p-Xylene	ND		2.00	0.124	ug/L			03/02/16 15:42	1
o-Xylene	ND		1.00	0.0620	ug/L			03/02/16 15:42	1
Toluene	ND		1.00	0.0380	ug/L			03/02/16 15:42	1

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Client Sample ID: Trip Blanks
Date Collected: 02/22/16 00:00
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-8
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	ND		3.00	0.0160	ug/L			03/02/16 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 140*		*03/02/16 15:42*	*1*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*		*03/02/16 15:42*	*1*
Dibromofluoromethane (Surr)	*104*		*71.2 - 143*		*03/02/16 15:42*	*1*
Toluene-d8 (Surr)	*101*		*74.1 - 135*		*03/02/16 15:42*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-5614/6
Matrix: Water
Analysis Batch: 5614

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.200	0.0320	ug/L			03/01/16 11:37	1
Ethylbenzene	ND		1.00	0.0860	ug/L			03/01/16 11:37	1
m,p-Xylene	ND		2.00	0.124	ug/L			03/01/16 11:37	1
o-Xylene	ND		1.00	0.0620	ug/L			03/01/16 11:37	1
Toluene	ND		1.00	0.0380	ug/L			03/01/16 11:37	1
Xylenes, Total	ND		3.00	0.0160	ug/L			03/01/16 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 140*		*03/01/16 11:37*	*1*
4-Bromofluorobenzene (Surr)	*117*		*68.7 - 141*		*03/01/16 11:37*	*1*
Dibromofluoromethane (Surr)	*99*		*71.2 - 143*		*03/01/16 11:37*	*1*
Toluene-d8 (Surr)	*85*		*74.1 - 135*		*03/01/16 11:37*	*1*

Lab Sample ID: LCS 590-5614/1004
Matrix: Water
Analysis Batch: 5614

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.71		ug/L		107	80 - 140
Ethylbenzene	10.0	10.28		ug/L		102	80 - 120
m,p-Xylene	10.0	11.41		ug/L		114	80 - 120
o-Xylene	10.0	11.37		ug/L		114	80 - 120
Toluene	10.0	11.15		ug/L		111	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 140*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*
Dibromofluoromethane (Surr)	*95*		*71.2 - 143*
Toluene-d8 (Surr)	*96*		*74.1 - 135*

Lab Sample ID: MB 590-5629/7
Matrix: Water
Analysis Batch: 5629

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.200	0.0320	ug/L			03/02/16 12:39	1
Ethylbenzene	ND		1.00	0.0860	ug/L			03/02/16 12:39	1
m,p-Xylene	ND		2.00	0.124	ug/L			03/02/16 12:39	1
o-Xylene	ND		1.00	0.0620	ug/L			03/02/16 12:39	1
Toluene	ND		1.00	0.0380	ug/L			03/02/16 12:39	1
Xylenes, Total	ND		3.00	0.0160	ug/L			03/02/16 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 140*		*03/02/16 12:39*	*1*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*03/02/16 12:39*	*1*
Dibromofluoromethane (Surr)	*102*		*71.2 - 143*		*03/02/16 12:39*	*1*
Toluene-d8 (Surr)	*102*		*74.1 - 135*		*03/02/16 12:39*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 590-5629/1005
Matrix: Water
Analysis Batch: 5629

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.41		ug/L		104	80 - 140
Ethylbenzene	10.0	9.507		ug/L		95	80 - 120
m,p-Xylene	10.0	9.577		ug/L		96	80 - 120
o-Xylene	10.0	9.894		ug/L		99	80 - 120
Toluene	10.0	9.909		ug/L		99	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 140*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*
Dibromofluoromethane (Surr)	*101*		*71.2 - 143*
Toluene-d8 (Surr)	*101*		*74.1 - 135*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-5615/6
Matrix: Water
Analysis Batch: 5615

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	17.8	ug/L			03/01/16 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*117*		*68.7 - 141*		*03/01/16 11:37*	*1*

Lab Sample ID: LCS 590-5615/1005
Matrix: Water
Analysis Batch: 5615

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline	998	886.3		ug/L		89	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*68.7 - 141*

Lab Sample ID: MB 590-5630/7
Matrix: Water
Analysis Batch: 5630

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		100	17.8	ug/L			03/02/16 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*68.7 - 141*		*03/02/16 12:39*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS) (Continued)

Lab Sample ID: LCS 590-5630/1006
Matrix: Water
Analysis Batch: 5630

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			998	1052		ug/L		105	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*

QC Association Summary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

GC/MS VOA

Analysis Batch: 5614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-2875-1	MW-301	Total/NA	Ground Water	8260C	
590-2875-2	MW-307	Total/NA	Ground Water	8260C	
590-2875-4	MW-310	Total/NA	Ground Water	8260C	
590-2875-6	MW-312	Total/NA	Ground Water	8260C	
590-2875-7	TX-03A	Total/NA	Ground Water	8260C	
LCS 590-5614/1004	Lab Control Sample	Total/NA	Water	8260C	
MB 590-5614/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 5615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-2875-1	MW-301	Total/NA	Ground Water	NWTPH-Gx	
590-2875-2	MW-307	Total/NA	Ground Water	NWTPH-Gx	
590-2875-4	MW-310	Total/NA	Ground Water	NWTPH-Gx	
590-2875-6	MW-312	Total/NA	Ground Water	NWTPH-Gx	
590-2875-7	TX-03A	Total/NA	Ground Water	NWTPH-Gx	
LCS 590-5615/1005	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
MB 590-5615/6	Method Blank	Total/NA	Water	NWTPH-Gx	

Analysis Batch: 5629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-2875-1	MW-301	Total/NA	Ground Water	8260C	
590-2875-2	MW-307	Total/NA	Ground Water	8260C	
590-2875-3	MW-308	Total/NA	Ground Water	8260C	
590-2875-4	MW-310	Total/NA	Ground Water	8260C	
590-2875-5	MW-311	Total/NA	Ground Water	8260C	
590-2875-6	MW-312	Total/NA	Ground Water	8260C	
590-2875-7	TX-03A	Total/NA	Ground Water	8260C	
590-2875-8	Trip Blanks	Total/NA	Water	8260C	
LCS 590-5629/1005	Lab Control Sample	Total/NA	Water	8260C	
MB 590-5629/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 5630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
590-2875-3	MW-308	Total/NA	Ground Water	NWTPH-Gx	
590-2875-5	MW-311	Total/NA	Ground Water	NWTPH-Gx	
LCS 590-5630/1006	Lab Control Sample	Total/NA	Water	NWTPH-Gx	
MB 590-5630/7	Method Blank	Total/NA	Water	NWTPH-Gx	

Lab Chronicle

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Client Sample ID: MW-301
Date Collected: 02/22/16 11:15
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	43 mL	43 mL	5629	03/02/16 13:13	MRS	TAL SPK
Total/NA	Analysis	8260C		1	43 mL	43 mL	5614	03/01/16 12:32	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5615	03/01/16 12:32	MRS	TAL SPK

Client Sample ID: MW-307
Date Collected: 02/23/16 08:50
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	43 mL	43 mL	5629	03/02/16 13:34	MRS	TAL SPK
Total/NA	Analysis	8260C		1	43 mL	43 mL	5614	03/01/16 12:53	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5615	03/01/16 12:53	MRS	TAL SPK

Client Sample ID: MW-308
Date Collected: 02/23/16 09:35
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	5629	03/02/16 13:55	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5630	03/02/16 13:55	MRS	TAL SPK

Client Sample ID: MW-310
Date Collected: 02/22/16 13:35
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	43 mL	43 mL	5629	03/02/16 14:17	MRS	TAL SPK
Total/NA	Analysis	8260C		1	43 mL	43 mL	5614	03/01/16 13:36	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5615	03/01/16 13:36	MRS	TAL SPK

Client Sample ID: MW-311
Date Collected: 02/22/16 14:20
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-5
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	5629	03/02/16 14:38	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5630	03/02/16 14:38	MRS	TAL SPK

Lab Chronicle

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Client Sample ID: MW-312
Date Collected: 02/23/16 13:15
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		20	43 mL	43 mL	5629	03/02/16 15:00	MRS	TAL SPK
Total/NA	Analysis	8260C		1	43 mL	43 mL	5614	03/01/16 14:18	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5615	03/01/16 14:18	MRS	TAL SPK

Client Sample ID: TX-03A
Date Collected: 02/22/16 12:15
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		100	43 mL	43 mL	5629	03/02/16 15:21	MRS	TAL SPK
Total/NA	Analysis	8260C		1	43 mL	43 mL	5614	03/01/16 14:40	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	5615	03/01/16 14:40	MRS	TAL SPK

Client Sample ID: Trip Blanks
Date Collected: 02/22/16 00:00
Date Received: 02/25/16 13:20

Lab Sample ID: 590-2875-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	5629	03/02/16 15:42	MRS	TAL SPK

Laboratory References:

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

Definitions/Glossary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

Client: AECOM, Inc.
Project/Site: 2555 13th Avenue, Seattle (60411076)

TestAmerica Job ID: 590-2875-1
SDG: 60411076

Laboratory: TestAmerica Spokane

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Washington	State Program	10	C569	01-06-17

Analysis Method	Prep Method	Matrix	Analyte

Shell Oil Products Chain Of Custody Record

AECOM

LAB (LOCATION)

- ☑ ACCUTEST ( )
- ☐ CALSCIENCE ( )
- ☒ TESTAMERICA (SPOKANE)
- ☐ Other ( )

Lab Vendor # 1813640 (Accutest)

Please Check Appropriate Box:

- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☑ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☐ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER

Print Bill To Contact Name:

PO #

INCIDENT # (ENV SERVICES): 3 0 0 0 3 6

☐ CHECK IF NO INCIDENT # APPLIES

SAP #: 3 5 7 0 3 2

DATE: 2/23/16

PAGE: 1 of 1

SAMPLING COMPANY: AECOM

LOG CODE:

ADDRESS: 111 Southwest Columbia Street, Suite 1500, Portland, Oregon 97201

PROJECT CONTACT (Hardcopy or PDF Report to): Clifford J Pearson

TELEPHONE: 503-222-7200

FAX: 503-222-4292

Bill To Contact E-MAIL: Clifford.Pearson@aecom.com

SITE ADDRESS (Street and City): 2555 13th Avenue, Seattle

State: WA

GLOBAL ID NO:

EDF DELIVERABLE TO (Name, Company, Office Location): Clifford J Pearson, AECOM, Portland, OR

PHONE NO: 503-222-7200

E-MAIL: Clifford.Pearson@aecom.com

CONSULTANT PROJECT NO: 60411076

SAMPLER NAME(S) (Print): MARK TAUSCHER

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☐ OTHER (SPECIFY)

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :

- ☑ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☐ RECEIPT VERIFICATION REQUESTED
- ☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS (UNIT COST / NON-UNIT COST): NWTPH-Gx; BTEX; RBDM VOCs (8260B)

FIELD NOTES:

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	NWTPH-Gx	BTEX	RBDM VOCs (8260B)	Container PID Readings or Laboratory Notes
	MW-301	2/22/16	1115	WATER	X					28	X	X		
	MW-307	2/23/16	0850	WATER	X					28	X	X		
	MW-308	2/23/16	0935	WATER	X					28	X	X		
	MW-310	2/22/16	1335	WATER	X					28	X	X		
	MW-311	2/22/16	1420	WATER	X					28	X	X		
	MW-312	2/23/16	1315	WATER	X					28	X	X		
	TX-03A	2/22/16	1215	WATER	X					28	X	X		
	~~MW-1~~ MT			~~WATER~~	~~X~~					~~0~~	~~X~~	~~X~~		
	Trip Blank	–	–	WATER	X					1		X		

Relinquished by (Signature)	Received by (Signature)	Date	Time
[signature]	FEDEX	2/23/16	1530
	[signature] Matt Sada	2-24-16	1320

6.7°C (Lovi)

05/2/06 Revision

590-2875 Chain of Custody

Login Sample Receipt Checklist

Client: AECOM, Inc.

Job Number: 590-2875-1
SDG Number: 60411076

Login Number: 2875
List Number: 1
Creator: Arrington, Randee E

List Source: TestAmerica Spokane

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.	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	