PBW

PASTOR, BEHLING & WHEELER, LLC

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September 27, 2017
Project No. 5040

VIA ELECTRONIC MAIL

Ms. Raji Josiam
Remedial Project Manager, 6SF-RA
U.S. Environmental Protection Agency Region 6
1445 Ross Avenue
Dallas, Texas 75202

Re: Post-Hurricane Harvey Soil and Groundwater Sampling
US Oil Recovery (USOR) Superfund Site
Pasadena, Texas

Dear Ms. Josiam:

Pastor, Behling & Wheeler, LLC (PBW), on behalf of the US Oil Recovery (USOR) PRP Group and Bayer CropScience, is providing herewith a summary of sampling activities conducted on September 8, 2017 at the US Oil Recovery Superfund Site (the "Site") in Pasadena, Texas. The objective of the sampling activities was to provide data on Site conditions after Hurricane Harvey as requested by U. S. Environmental Protection Agency (EPA). This letter provides a summary of the sampling protocols and the analytical data.

Sampling Protocol

One groundwater and one soil sample were collected from previously sampled areas of the 400 N. Richey Street parcel of the Site on September 8, 2017 under EPA oversight. Figure 1 shows the sample locations, which were within areas that were projected to have been inundated by hurricane floodwaters.

A groundwater sample was collected from MW-5 (Figure 1). The groundwater sample was collected in accordance with the USOR Remedial Investigation/Feasibility Study (RI/FS) Field Sampling Plan dated December 23, 2015. The analyte list was identical to that for groundwater samples collected for the RI, detailed in the USOR RI/FS Quality Assurance Project Plan (QAPP) dated December 23, 2015. The analytes include metals, volatile organic compounds, semi-volatile organic compounds, pesticides and herbicides, and total petroleum hydrocarbons.

Using the method detailed by EPA, a composite soil sample was collected near SB-66, which was a soil boring sampled for the RI. A 25 by 25-foot square was measured in the vicinity of former soil sampling location SB-66, (Figure 1). Inside the 25 by 25-foot area, pin flags were placed on a grid to mark four locations where soil samples were to be collected for a single composite sample. A hand auger was used to collect soil from the 0 to 0.5 feet below ground surface (bgs) depth interval at each location marked by a pin flag. The four discrete soil samples

were mixed in a large zip top bag, and a composite soil sample was collected from the bag for laboratory analysis. For laboratory analysis, the analyte list was identical to that for soil samples collected for the RI, which are detailed in the USOR RI/FS QAPP. These include metals, volatile organic compounds, semi-volatile organic compounds, pesticides and herbicides, and total petroleum hydrocarbons.

Samples were placed on ice for transportation to the analytical laboratory and delivered to ALS Environmental (Houston, Texas), the morning of September 8, 2017 under chain-of-custody control. Samples were accompanied by a laboratory-supplied trip blank.

Analytical Results and Comparison

Tables 1 through 5 compare the results of the MW-5 groundwater sample collected on September 8, 2017 to the results of the groundwater sample collected from the same well on July 20, 2017 as part of RI activities. The analytical results for both groundwater samples are very similar. Tables 6 through 10 compare the results of the composite soil sample collected near SB-66 on September 8, 2017 to the results of the soil sample collected from the same depth interval at SB-66 on June 28, 2017 as part of RI activities. The analytical results for both soil samples are also very similar.

Photographs of the sampling activities are provided in Attachment A. The original final laboratory reports and corresponding data validations reports for the post-hurricane sample analyses are provided in Attachments B (groundwater sample analyses) and C (soil sample analyses).

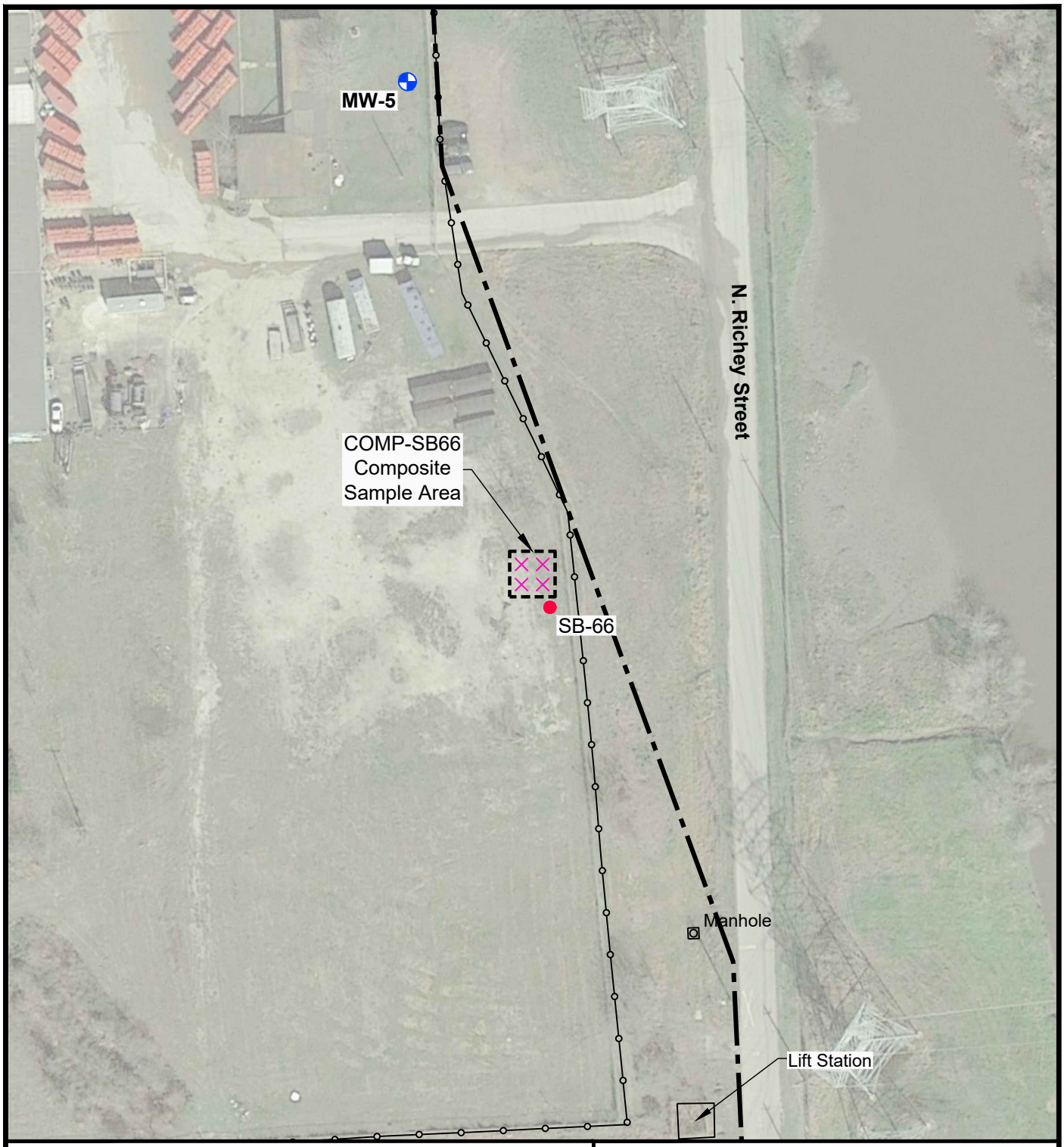
Please contact me at (512) 671-3434 if you have any questions or comments on this letter report.

Sincerely,
PASTOR, BEHLING & WHEELER, LLC

Eric Pastor, P.E.
Project Coordinator

Attachments: Figure 1 – Sample Location Map
Tables 1 through 10: Groundwater and Soil Sample Analytical Results and Comparisons
Attachment A - Photographs
Attachments B and C - Analytical Reports and Data Validation Reports

FIGURE



EXPLANATION

- Approx. Property Boundary
- Approx. Security Fence
- Soil Boring Location - June 2016
- Monitoring Well Location
- Composite Sample Location

N

Approx. Scale in Feet

0 40 80

Source:
Imagery taken from Google Earth, photography dated January 23, 2017.

US OIL RECOVERY SUPERFUND SITE

PASADENA, HARRIS COUNTY, TEXAS

Figure 1

POST HURRICANE HARVEY SAMPLE LOCATION MAP

PROJECT: 3333	BY: AJD	REVISIONS
DATE: SEPT., 2017	CHECKED: MKW	

PASTOR, BEHLING & WHEELER, LLC

CONSULTING ENGINEERS AND SCIENTISTS

TABLES

Table 1
On-Property and Post-Harvey Groundwater Sampling Results: Metals
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
Aluminum	0.155		0.00445	U
Antimony	<0.000400	U	<0.0004	U
Arsenic	0.000605	J	0.000637	J
Barium	0.195		0.189	
Beryllium	<0.000200	U	<0.0002	U
Boron	0.412		0.299	
Cadmium	<0.000200	U	<0.0002	U
Chromium	<0.000400	U	<0.0004	U
Cobalt	0.00149	J	0.00195	J
Copper	<0.00100	U	0.00103	J
Lead	<0.000600	U	<0.0006	U
Manganese	0.113		0.11	
Mercury	<0.0000300	U	<0.00003	U
Nickel	0.00238	J	0.00198	J
Selenium	<0.00110	U	<0.0011	U
Silver	0.000872	J	<0.0002	U
Thallium	<0.000200	U	<0.0002	U
Vanadium	0.00279	J	0.0011	J
Zinc	0.00467	U	0.00348	J

NOTES:

1. Q = lab qualifiers as follows:
   J = Estimated value
   U = Analyte not detected at the associated numerical value
   R = Rejected
   JL = Estimated value, potential low bias
   JH = Estimated value, potential high bias

Table 2

On-Property and Post-Harvey Groundwater Sampling Results: Pesticides & Herbicides

US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
2,4,5-T	<0.0000505	U	<0.00005	U
2,4,5-TP (Silvex)	<0.0000505	U	<0.00005	U
2,4-D	<0.0000606	U	<0.00006	U
2,4-DB	<0.0000808	U	<0.00008	U
4,4´-DDD	<0.0000025	JL	<0.0000025	U
4,4´-DDE	<0.0000025	JL	<0.0000025	U
4,4´-DDT	0.000039	JL	<0.0000025	U
Aldrin	0.0000033	JL	<0.0000012	U
alpha-BHC	<0.0000013	JL	<0.0000012	U
alpha-Chlordane	0.0000028	JL	<0.0000025	U
beta-BHC	<0.0000013	JL	<0.0000012	U
Dalapon	<0.0000707	U	<0.00007	U
delta-BHC	<0.0000013	JL	<0.0000012	JL
Dicamba	<0.0000505	U	<0.00005	U
Dichlorprop	<0.0000808	U	<0.00008	U
Dieldrin	0.000014	JL	0.0000049	JL
Dinoseb	<0.0000505	JL	<0.00005	U
Endosulfan I	<0.0000013	JL	<0.0000012	U
Endosulfan II	<0.0000025	JL	<0.0000025	U
Endosulfan sulfate	<0.0000025	JL	<0.0000025	U
Endrin	<0.0000025	JL	<0.0000025	U
Endrin aldehyde	<0.0000025	JL	<0.0000025	U
Endrin ketone	<0.0000025	JL	<0.0000025	U
gamma-BHC	0.0000088	JL	0.0000046	JL
gamma-Chlordane	<0.0000025	JL	<0.0000025	U
Heptachlor	0.000008	JL	<0.0000012	U
Heptachlor epoxide	0.000012	JL	0.0000045	JL
MCPA	<0.00818	U	<0.0081	U
MCPP	<0.00707	U	<0.007	U
Methoxychlor	<0.000013	JL	<0.000012	U
Toxaphene	<0.000025	JL	<0.000025	U

NOTES:

1. Q = lab qualifiers as follows:

J = Estimated value

U = Analyte not detected at the associated numerical value

R = Rejected

JL = Estimated value, potential low bias

JH = Estimated value, potential high bias

Table 3
On-Property and Post-Harvey Groundwater Sampling Results: Semi-Volatile Organic Compounds
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
1,1´-Biphenyl	<0.000024	U	<0.000024	U
1,2,4,5-Tetrachlorobenzene	<0.000040	U	<0.000039	U
1,4-Dioxane	<0.000058	JL	<0.000057	JL
1-Methylnaphthalene*T[8]	<0.000010	U	<0.00001	JL
2,3,4,6-Tetrachlorophenol	<0.000056	JL	<0.000055	JL
2,4,5-Trichlorophenol	<0.000058	JL	<0.000057	JL
2,4,6-Trichlorophenol	<0.000049	JL	<0.000048	JL
2,4-Dichlorophenol	<0.000044	JL	<0.000043	JL
2,4-Dimethylphenol	<0.000041	JL	<0.00004	JL
2,4-Dinitrophenol	<0.00010	JL	<0.0001	JL
2,4-Dinitrotoluene	<0.000059	U	<0.000058	U
2,6-Dinitrotoluene	<0.000043	U	<0.000042	U
2-Chloronaphthalene	<0.000021	U	<0.000021	U
2-Chlorophenol	<0.000037	JL	<0.000036	JL
2-Methylnaphthalene*L[9],*T	<0.000019	U	<0.000019	JL
2-Methylphenol	<0.000046	JL	<0.000045	JL
2-Nitroaniline	<0.000042	U	<0.000041	U
2-Nitrophenol	<0.000035	JL	<0.000034	JL
3-Methylphenol	<0.000037	JL	<0.000036	JL
3,3´-Dichlorobenzidine	<0.000045	U	<0.000044	U
3-Nitroaniline	<0.000050	U	<0.000049	U
4,6-Dinitro-2-methylphenol	<0.000020	JL	<0.00002	JL
4-Bromophenyl phenyl ether	<0.000052	U	<0.000051	JL
4-Chloro-3-methylphenol	<0.000033	JL	<0.000032	JL
4-Chlorophenyl phenyl ether	<0.000045	U	<0.000044	JL
4-Methylphenol	<0.000037	JL	<0.000036	JL
4-Nitroaniline	<0.000036	U	<0.000035	JL
4-Nitrophenol	<0.000048	JL	<0.000047	JL
Acenaphthene*L,*T	<0.000028	U	<0.000027	U
Acenaphthylene*L,*T	<0.000015	U	<0.000015	U
Acetophenone	<0.000024	U	<0.000024	JL
Anthracene*L,*T	<0.000014	U	<0.000014	U
Atrazine	<0.000034	U	<0.000033	JL
Benz(a)anthracene*H[10],*T	<0.000051	U	<0.00005	U
Benzaldehyde	<0.000031	JL	<0.00003	JL
Benzo(a)pyrene*H,*T	<0.000020	U	<0.00002	U
Benzo(b)fluoranthene*T	<0.000023	U	<0.000023	U
Benzo(g,h,i)perylene*T	<0.000014	U	<0.000014	U
Benzo(k)fluoranthene*T	<0.000019	U	<0.000019	U
Bis(2-chloroethoxy)methane	<0.000031	U	<0.00003	U
Bis(2-chloroethyl)ether	<0.000027	U	<0.000026	JL
Bis(2-chloroisopropyl)ether	<0.000071	U	<0.00007	JL
Bis(2-ethylhexyl)phthalate	<0.000038	U	<0.000037	U
Butyl benzyl phthalate	<0.000019	U	<0.000019	U
Caprolactam	<0.000046	U	<0.000045	U
Carbazole	<0.000026	U	<0.000025	U
Chrysene*H,*T	<0.000021	U	<0.000021	U

Table 3
On-Property and Post-Harvey Groundwater Sampling Results: Semi-Volatile Organic Compounds
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
Dibenz(a,h)anthracene*H,*T	<0.000024	U	<0.000024	U
Dibenzofuran	<0.000020	U	<0.00002	U
Diethyl phthalate	<0.000031	U	<0.00003	U
Dimethyl phthalate	<0.000042	U	<0.000041	U
Di-n-butyl phthalate	<0.000020	U	<0.00002	U
Di-n-octyl phthalate	<0.000020	U	<0.00002	U
Fluoranthene*H,*T	<0.000010	U	<0.00001	U
Fluorene*L,*T	<0.000031	U	<0.00003	U
Hexachlorobenzene	<0.000045	U	<0.000044	U
Hexachlorobutadiene	<0.000031	U	<0.00003	JL
Hexachlorocyclopentadiene	<0.000031	U	<0.00003	JL
Hexachloroethane	<0.000060	U	<0.000059	U
Indeno(1,2,3-cd)pyrene*T	<0.000022	U	<0.000022	U
Isophorone	<0.000026	U	<0.000025	JL
Naphthalene*L,*T	<0.000020	U	<0.00002	U
Nitrobenzene	<0.000024	U	<0.000024	U
N-Nitrosodi-n-propylamine	<0.000033	U	<0.000032	JL
N-Nitrosodiphenylamine	<0.000026	U	<0.000025	U
Pentachlorophenol	<0.000081	JL	<0.000079	JL
Phenanthrene*L,*T	<0.000021	U	<0.000021	JL
Phenol	<0.000036	JL	<0.000035	JL
Pyrene*H,*T	<0.000019	U	<0.000019	U

NOTES:

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   U = Analyte not detected at the associated numerical value
   R = Rejected
   JL = Estimated value, potential low bias
   JH = Estimated value, potential high bias

Table 4
On-Property and Post-Harvey Groundwater Sampling Results: Volatile Organic Compounds
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
1,1,1,2-Tetrachloroethane	<0.00030	U	<0.0003	U
1,1,1-Trichloroethane	<0.00020	U	<0.0002	U
1,1,2,2-Tetrachloroethane	<0.00050	U	<0.0005	U
1,1,2-Trichlor-1,2,2-trifluoroethane	<0.0010	U	<0.0005	U
1,1,2-Trichloroethane	<0.00030	U	<0.0003	U
1,1-Dichloroethane	<0.00020	U	<0.0002	U
1,1-Dichloroethene	<0.00020	U	<0.0002	U
1,2,3-Trichlorobenzene	<0.00040	U	<0.0004	U
1,2,4-Trichlorobenzene	<0.00050	U	<0.0005	U
1,2,4-Trimethylbenzene	<0.00030	U	<0.0003	U
1,2-Dibromoethane	<0.00020	U	<0.0002	U
1,2-Dichlorobenzene	<0.00050	U	<0.0005	U
1,2-Dichloroethane	<0.00020	U	<0.0002	U
1,2-Dichloropropane	<0.00050	U	<0.0005	U
1,3,5-Trimethylbenzene	<0.00030	U	<0.0003	U
1,3-Dichlorobenzene	<0.00040	U	<0.0004	U
1,4-Dichlorobenzene	<0.00040	U	<0.0004	U
2-Butanone	<0.00050	U	<0.0005	U
2-Hexanone	<0.0010	U	<0.001	U
4-Methyl-2-pentanone	<0.00070	U	<0.0007	U
Acetone	<0.0020	U	0.018	
Benzene	<0.00020	U	<0.0002	U
Bromodichloromethane	<0.00020	U	<0.0002	U
Bromoform	<0.00040	U	<0.0004	U
Bromomethane	<0.00040	U	<0.0004	U
Carbon disulfide	<0.00060	U	<0.0006	U
Carbon tetrachloride	<0.00050	U	<0.0005	U
Chlorobenzene	<0.00030	U	<0.0003	U
Chloroethane	<0.00030	U	<0.0003	U
Chloroform	<0.00020	U	<0.0002	U
Chloromethane	<0.00020	U	<0.0002	U
cis-1,2-Dichloroethene	<0.00020	U	<0.0002	U
cis-1,3-Dichloropropene	<0.00010	U	<0.0001	U
Cyclohexane	<0.00030	U	<0.0003	U
Dibromochloromethane	<0.00030	U	<0.0003	U
Dichlorodifluoromethane	<0.00030	U	<0.0003	U
Ethylbenzene	<0.00030	U	<0.0003	U

Table 4

On-Property and Post-Harvey Groundwater Sampling Results: Volatile Organic Compounds

US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
Isopropylbenzene	<0.00030	U	<0.0003	U
Methyl acetate	<0.0010	U	<0.001	U
Methyl tert-butyl ether	<0.00020	U	<0.0002	U
Methylcyclohexane	<0.00030	U	<0.0003	U
Methylene chloride	<0.0010	U	<0.001	U
n-Butylbenzene	<0.00040	U	<0.0004	U
n-Propylbenzene	<0.00030	U	<0.0003	U
sec-Butylbenzene	<0.00030	U	<0.0003	U
Styrene	<0.00030	U	<0.0003	U
tert-Butylbenzene	<0.00030	U	<0.0003	U
Tetrachloroethene	<0.00030	U	<0.0003	U
Toluene	<0.00020	U	<0.0002	U
trans-1,2-Dichloroethene	<0.00020	U	<0.0002	U
trans-1,3-Dichloropropene	<0.00020	U	<0.0002	U
Trichloroethene	<0.00020	U	<0.0002	U
Trichlorofluoromethane	<0.00030	U	<0.0003	U
Vinyl chloride	<0.00020	U	<0.0002	U
Xylenes, Total	<0.00030	U	<0.0003	U

NOTES:

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J = Estimated value

U = Analyte not detected at the associated numerical value

R = Rejected

JL = Estimated value, potential low bias

JH = Estimated value, potential high bias

Table 5

On-Property and Post-Harvey Groundwater Sampling Results: Total Petroleum Hydrocarbons

US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	MW-5		MW-5	
Sample Date	7/20/2017		9/8/2017	
Contituent of Potential Concern	mg/L	Q[1]	mg/L	Q
C6-C12	<0.2	U	<0.2	U
>C12-C28	<0.2	U	<0.2	U
>C28-C35	<0.2	U	<0.2	U
TPH	<0.2	U	<0.2	U

NOTES:

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JH = Estimated value, potential high bias

Table 6
SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Metals (mg/kg)
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
Aluminum	6,770		9620	
Antimony	0.696	JL	0.322	J
Arsenic	4.52		5.36	
Barium	113		136	
Beryllium	0.316	J	0.568	J
Boron	5.92		8.51	
Cadmium	0.168	J	0.202	J
Chromium	15.1		16.4	
Cobalt	2.96		4.34	
Copper	14.8		15.5	
Lead	54.9		37.9	
Manganese	280		283	
Mercury	0.0997		0.0564	
Nickel	7.16		10.8	
Selenium	0.462	U	1.67	
Silver	0.106	J	0.126	J
Thallium	<0.0805	U	0.139	J
Vanadium	14.3		23	
Zinc	90.4	J	265	

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   R = Rejected
   JL = Estimated value, potential low bias
   JH = Estimated value, potential high bias

Table 7
SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Pesticides/Herbicides (mg/kg)
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
2,4,5-T	<0.0049	U	<0.0014	JL
2,4,5-TP (Silvex)	<0.0060	U	<0.0017	JL
2,4-D	0.021	JH	<0.0007	JL
2,4-DB	<0.0032	U	<0.0009	JL
4,4´-DDD	0.0033	J	<0.0005	U
4,4´-DDE	0.0014	J	<0.0005	U
4,4´-DDT	<0.00059	U	0.0011	J
Aldrin	<0.00036	U	<0.0003	U
alpha-BHC	<0.00036	U	<0.0003	U
alpha-Chlordane	0.017	J	0.0016	J
beta-BHC	<0.00036	U	0.0012	J
Dalapon	<0.0042	U	<0.0012	JL
delta-BHC	<0.00024	JL	<0.0002	JL
Dicamba	<0.0046	U	<0.0013	JL
Dichlorprop	<0.0056	U	<0.0016	JL
Dieldrin	0.0043	J	0.0011	J
Dinoseb	<0.0049	U	<0.0014	JL
Endosulfan I	0.0011	J	<0.0003	U
Endosulfan II	<0.00071	U	<0.0006	U
Endosulfan sulfate	<0.00071	U	<0.0006	U
Endrin	<0.00071	U	<0.0006	U
Endrin aldehyde	0.004		<0.0006	U
Endrin ketone	0.0055	JL	<0.0006	U
gamma-BHC	<0.00024	U	<0.0002	U
gamma-Chlordane	0.024	JL	0.0021	J
Heptachlor	0.0011	J	<0.0003	U
Heptachlor epoxide	0.0038		<0.0003	U
MCPA	<0.35	U	<0.1	JL
MCPP	<0.56	U	<0.16	JL
Methoxychlor	0.025		<0.0034	U
Toxaphene	<0.0057	U	<0.0048	U

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   U = Analyte not detected at the associated numerical value
   R = Rejected
   JL = Estimated value, potential low bias
   JH = Estimated value, potential high bias

Table 8
SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Volatile Organic Compounds (mg/kg)
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
1,1,1,2-Tetrachloroethane	<0.00051	U	<0.0006	U
1,1,1-Trichloroethane	<0.00043	U	<0.0005	U
1,1,2,2-Tetrachloroethane	<0.00068	U	<0.0008	U
1,1,2-Trichlor-1,2,2-trifluoroethane	<0.00060	U	<0.0007	U
1,1,2-Trichloroethane	<0.00043	U	<0.0005	U
1,1-Dichloroethane	<0.00043	U	<0.0005	U
1,1-Dichloroethene	<0.00043	U	<0.0005	U
1,2,3-Trichlorobenzene	<0.00085	JL	<0.001	U
1,2,4-Trichlorobenzene	<0.00085	JL	<0.001	U
1,2,4-Trimethylbenzene	<0.00085	JL	<0.001	U
1,2-Dibromoethane	<0.00043	U	<0.0005	U
1,2-Dichlorobenzene	<0.00085	JL	<0.001	U
1,2-Dichloroethane	<0.00051	U	<0.0006	U
1,2-Dichloropropane	<0.00068	U	<0.0008	U
1,3,5-Trimethylbenzene	<0.00068	JL	<0.0008	U
1,3-Dichlorobenzene	<0.00085	JL	<0.001	U
1,4-Dichlorobenzene	<0.00085	JL	<0.001	U
2-Butanone	<0.0011	U	<0.0013	U
2-Hexanone	<0.0012	U	<0.0014	U
4-Methyl-2-pentanone	<0.0017	U	<0.002	U
Acetone	<0.0017	U	<0.002	U
Benzene	<0.00043	U	<0.0005	U
Bromodichloromethane	<0.00043	U	<0.0005	U
Bromoform	<0.00051	U	<0.0006	U
Bromomethane	<0.00085	U	<0.001	U
Carbon disulfide	<0.00051	U	<0.0006	U
Carbon tetrachloride	<0.00051	U	<0.0006	U
Chlorobenzene	<0.00051	U	<0.0006	U
Chloroethane	<0.00068	U	<0.0008	U
Chloroform	<0.00043	U	<0.0005	U
Chloromethane	<0.00043	U	<0.0005	U
cis-1,2-Dichloroethene	<0.00068	U	<0.0008	U
cis-1,3-Dichloropropene	<0.00043	U	<0.0005	U
Cyclohexane	<0.00085	JL	<0.001	U
Dibromochloromethane	<0.00043	U	<0.0005	U
Dichlorodifluoromethane	<0.00060	U	<0.0007	U
Ethylbenzene	<0.00060	U	<0.0007	U
Isopropylbenzene	<0.00077	JL	<0.0009	U
Methyl acetate	<0.00060	U	<0.0007	U
Methyl tert-butyl ether	<0.00043	U	<0.0005	U
Methylcyclohexane	<0.00085	JL	<0.001	U
Methylene chloride	<0.00085	U	<0.001	U

Table 8

SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Volatile Organic Compounds (mg/kg)

US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
n-Butylbenzene	<0.00051	JL	<0.0006	U
n-Propylbenzene	<0.00077	JL	<0.0009	U
sec-Butylbenzene	<0.00085	JL	<0.001	U
Styrene	<0.00060	JL	<0.0007	U
tert-Butylbenzene	<0.00085	JL	<0.001	U
Tetrachloroethene	<0.00060	U	<0.0007	U
Toluene	<0.00051	U	<0.0006	U
trans-1,2-Dichloroethene	<0.00043	U	<0.0005	U
trans-1,3-Dichloropropene	<0.00051	U	<0.0006	U
Trichloroethene	<0.00051	U	<0.0006	U
Trichlorofluoromethane	<0.00043	U	<0.0005	U
Vinyl chloride	<0.00068	U	<0.0008	U
Xylenes, Total	<0.0020	JL	<0.001	U

1. Q = lab qualifiers as follows:

J = Estimated value

U = Analyte not detected at the associated numerical value

R = Rejected

JL = Estimated value, potential low bias

JH = Estimated value, potential high bias

Table 9
SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Semi-Volatile Organic Compounds (mg/kg)
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
1,1´-Biphenyl	<0.0020	U	<0.0017	JL
1,2,4,5-Tetrachlorobenzene	<0.0012	U	<0.001	U
1,4-Dioxane	<0.0026	JL	<0.0022	JL
1-Methylnaphthalene*T[9]	<0.0018	U	<0.0015	JL
2,3,4,6-Tetrachlorophenol	<0.0034	U	<0.0029	JL
2,4,5-Trichlorophenol	<0.0030	U	<0.0025	JL
2,4,6-Trichlorophenol	<0.0020	U	<0.0017	JL
2,4-Dichlorophenol	<0.0015	U	<0.0013	JL
2,4-Dimethylphenol	<0.0039	U	<0.0033	JL
2,4-Dinitrophenol	<0.0053	R	<0.0045	JL
2,4-Dinitrotoluene	<0.0011	U	<0.0009	U
2,6-Dinitrotoluene	<0.0039	U	<0.0033	U
2-Chloronaphthalene	<0.0015	U	<0.0013	U
2-Chlorophenol	<0.0015	U	<0.0013	JL
2-Methylnaphthalene*L[10],*T	<0.00059	U	0.0037	J
2-Methylphenol	<0.0013	U	<0.0011	JL
2-Nitroaniline	<0.0023	U	<0.0019	U
2-Nitrophenol	<0.0030	JL	<0.0025	JL
3,3´-Dichlorobenzidine	<0.0030	U	<0.0025	U
3-Methylphenol	0.0025	J	<0.001	JL
3-Nitroaniline	<0.0023	U	<0.0019	U
4,6-Dinitro-2-methylphenol	<0.0025	R	<0.0021	JL
4-Bromophenyl phenyl ether	<0.0019	U	<0.0016	U
4-Chloro-3-methylphenol	<0.00083	U	<0.0007	JL
4-Chlorophenyl phenyl ether	<0.0018	U	<0.0015	U
4-Methylphenol	0.0025	J	<0.001	JL
4-Nitroaniline	<0.0026	U	<0.0022	U
4-Nitrophenol	<0.0023	U	<0.0019	JL
Acenaphthene*L,*T	0.0045		<0.0005	U
Acenaphthylene*L,*T	0.0049		0.0041	J
Acetophenone	0.0078	JL	<0.0008	JL
Anthracene*L,*T	0.025		0.016	
Atrazine	<0.0024	U	<0.002	U
Benz(a)anthracene*H[11],*T	0.15		0.1	
Benzaldehyde	<0.0014	JL	<0.0012	R
Benzo(a)pyrene*H,*T	0.19		0.12	JL
Benzo(b)fluoranthene*T	0.32		0.17	JL
Benzo(g,h,i)perylene*T	0.16		0.11	JL
Benzo(k)fluoranthene*T	0.1		0.069	JL
Bis(2-chloroethoxy)methane	<0.0011	U	<0.0009	JL
Bis(2-chloroethyl)ether	<0.0013	U	<0.0011	JL
Bis(2-chloroisopropyl)ether	<0.0017	U	<0.0014	JL
Bis(2-ethylhexyl)phthalate	0.17		0.079	
Butyl benzyl phthalate	0.033		0.023	

Table 9
SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Semi-Volatile Organic Compounds (mg/kg)
US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
Caprolactam	<0.0014	U	<0.0012	U
Carbazole	0.029		0.018	
Chrysene*H,*T	0.21		0.13	
Dibenz(a,h)anthracene*H,*T	0.045		<0.0016	U
Dibenzofuran	0.0024	J	<0.0007	U
Diethyl phthalate	<0.0012	U	<0.001	U
Dimethyl phthalate	<0.00095	U	<0.0008	U
Di-n-butyl phthalate	0.11		0.045	
Di-n-octyl phthalate	<0.0011	U	<0.0009	U
Fluoranthene*H,*T	0.35		0.21	JL
Fluorene*L,*T	0.0054		0.0042	J
Hexachlorobenzene	<0.0011	U	<0.0009	U
Hexachlorobutadiene	<0.0014	U	<0.0012	JL
Hexachlorocyclopentadiene	<0.00095	R	<0.0008	R
Hexachloroethane	<0.0018	JL	<0.0015	JL
Indeno(1,2,3-cd)pyrene*T	0.19		0.096	
Isophorone	<0.00095	U	<0.0008	JL
Naphthalene*L,*T	0.0022	J	0.0037	JL
Nitrobenzene	<0.0011	U	<0.0009	JL
N-Nitrosodi-n-propylamine	<0.0013	U	<0.0011	JL
N-Nitrosodiphenylamine	<0.00083	U	<0.0007	U
Pentachlorophenol	<0.0039	U	<0.0033	JL
Phenanthrene*L,*T	0.12		0.08	
Phenol	<0.0013	U	<0.0011	JL
Pyrene*H,*T	0.25		0.19	JL

1. Q = lab qualifiers as follows:
   J = Estimated value
   U = Analyte not detected at the associated numerical value
   R = Rejected
   JL = Estimated value, potential low bias
   JH = Estimated value, potential high bias

Table 10

SB-66 Surface Soil and Post-Harvey Soil Sampling Results: Total Petroleum Hydrocarbons (mg/kg)

US Oil Recovery Superfund Site, Pasadena, TX

Sample Location	SB-66		COMP-SB-66	
Sample Date	6/28/2016		9/8/2017	
Sample Interval	0.0-0.5	Q[1]	0.0-0.5	Q
Constituent of Potential Concern	mg/kg		mg/kg	
C6-C12	<9.3	U	<10	U
>C12-C28	<9.3	U	<10	U
>C28-C35	<9.3	U	<10	U
TPH	<9.3	U	<10	U

1. Q = lab qualifiers as follows:

J = Estimated value

U = Analyte not detected at the associated numerical value

R = Rejected

JL = Estimated value, potential low bias

JH = Estimated value, potential high bias

ATTACHMENT A
PHOTOGRAPHS

PBW

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
USOR PRP Group	US Oil Recovery Superfund Site	5040

Photo No.	Date:
1	9/8/17

Description:

Photo of soil sampling area. The sampling area was located near SB-66, a soil boring sampled for the Remedial Investigation.

Photo No.	Date:
2	9/8/17

Description:

Collecting a groundwater sample from MW-5. MW-5 was also sampled for the Remedial Investigation.

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
Work Order: HS17090397

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17090397-01	COMP-SB66-170908	Soil		08-Sep-2017 08:20	08-Sep-2017 11:26	☐
HS17090397-02	TB01-170908	Water	ALS-090117-43	08-Sep-2017 10:15	08-Sep-2017 11:26	☐

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	COMP-SB66-170908	Lab ID:HS17090397-01	
Collection Date:	08-Sep-2017 08:20	Matrix:Soil	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
1,1,1,2-Tetrachloroethane	U		0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,1,1-Trichloroethane	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,1,2,2-Tetrachloroethane	U		0.00098	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,1,2-Trichlor-1,2,2-trifluoroethane	U		0.00086	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,1,2-Trichloroethane	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,1-Dichloroethane	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,1-Dichloroethene	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2,3-Trichlorobenzene	U		0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2,4-Trichlorobenzene	U		0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2,4-Trimethylbenzene	U		0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2-Dibromoethane	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2-Dichlorobenzene	U		0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2-Dichloroethane	U		0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,2-Dichloropropane	U		0.00098	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,3,5-Trimethylbenzene	U		0.00098	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,3-Dichlorobenzene	U		0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
1,4-Dichlorobenzene	U		0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
2-Butanone	U		0.0016	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
2-Hexanone	U		0.0017	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
4-Methyl-2-pentanone	U		0.0025	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
Acetone	U		0.0025	0.025	mg/Kg-dry	1	08-Sep-2017 12:46
Benzene	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Bromodichloromethane	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Bromoform	U		0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Bromomethane	U		0.0012	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
Carbon disulfide	U		0.00074	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
Carbon tetrachloride	U		0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Chlorobenzene	U		0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Chloroethane	U		0.00098	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
Chloroform	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Chloromethane	U		0.00061	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
cis-1,2-Dichloroethene	U		0.00098	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
cis-1,3-Dichloropropene	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Cyclohexane	U	n	0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Dibromochloromethane	U		0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Dichlorodifluoromethane	U		0.00086	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Ethylbenzene	U		0.00086	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Isopropylbenzene	U		0.0011	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	COMP-SB66-170908	Lab ID:HS17090397-01	
Collection Date:	08-Sep-2017 08:20	Matrix:Soil	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		**Method:SW8260**					Analyst: WLR
Methyl acetate		U	0.00086	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Methyl tert-butyl ether		U	0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Methylcyclohexane		U	0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Methylene chloride		U	0.0012	0.012	mg/Kg-dry	1	08-Sep-2017 12:46
n-Butylbenzene		U	0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
n-Propylbenzene		U	0.0011	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
sec-Butylbenzene		U	0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Styrene		U	0.00086	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
tert-Butylbenzene		U	0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Tetrachloroethene		U	0.00086	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Toluene		U	0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
trans-1,2-Dichloroethene		U	0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
trans-1,3-Dichloropropene		U	0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Trichloroethene		U	0.00074	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Trichlorofluoromethane		U	0.00061	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Vinyl chloride		U	0.00098	0.0025	mg/Kg-dry	1	08-Sep-2017 12:46
Xylenes, Total		U	0.0012	0.0061	mg/Kg-dry	1	08-Sep-2017 12:46
Surr: 1,2-Dichloroethane-d4	*90.5*			*70-126*	*%REC*	*1*	*08-Sep-2017 12:46*
Surr: 4-Bromofluorobenzene	*97.8*			*73-120*	*%REC*	*1*	*08-Sep-2017 12:46*
Surr: Dibromofluoromethane	*102*			*70-130*	*%REC*	*1*	*08-Sep-2017 12:46*
Surr: Toluene-d8	*85.5*			*82-121*	*%REC*	*1*	*08-Sep-2017 12:46*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	COMP-SB66-170908	Lab ID:HS17090397-01	
Collection Date:	08-Sep-2017 08:20	Matrix:Soil	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		**Method:SW8270**			Prep:SW3541 / 08-Sep-2017		Analyst: ACN
1,1´-Biphenyl	U		0.0022	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
1,2,4,5-Tetrachlorobenzene	U		0.0013	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
1,4-Dioxane	U	n	0.0029	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
1-Methylnaphthalene	U	n	0.0020	0.0043	mg/Kg-dry	1	08-Sep-2017 23:39
2,3,4,6-Tetrachlorophenol	U		0.0038	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2,4,5-Trichlorophenol	U		0.0033	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2,4,6-Trichlorophenol	U		0.0022	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2,4-Dichlorophenol	U		0.0017	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2,4-Dimethylphenol	U		0.0043	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2,4-Dinitrophenol	U		0.0059	0.017	mg/Kg-dry	1	08-Sep-2017 23:39
2,4-Dinitrotoluene	U		0.0012	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2,6-Dinitrotoluene	U		0.0043	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2-Chloronaphthalene	U		0.0017	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2-Chlorophenol	U		0.0017	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2-Methylnaphthalene	**0.0037**	J	**0.00066**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
2-Methylphenol	U		0.0014	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2-Nitroaniline	U		0.0025	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
2-Nitrophenol	U		0.0033	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
3&4-Methylphenol	U		0.0013	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
3,3´-Dichlorobenzidine	U		0.0033	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
3-Nitroaniline	U		0.0025	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
4,6-Dinitro-2-methylphenol	U		0.0028	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
4-Bromophenyl phenyl ether	U		0.0021	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
4-Chloro-3-methylphenol	U		0.00092	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
4-Chlorophenyl phenyl ether	U		0.0020	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
4-Nitroaniline	U		0.0029	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
4-Nitrophenol	U		0.0025	0.017	mg/Kg-dry	1	08-Sep-2017 23:39
Acenaphthene	U		0.00066	0.0043	mg/Kg-dry	1	08-Sep-2017 23:39
Acenaphthylene	**0.0041**	J	**0.0013**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Acetophenone	U		0.0011	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Anthracene	**0.016**		**0.00066**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Atrazine	U		0.0026	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Benz(a)anthracene	**0.10**		**0.0021**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Benzaldehyde	U	n	0.0016	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Benzo(a)pyrene	**0.12**		**0.0013**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Benzo(b)fluoranthene	**0.17**		**0.0016**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Benzo(g,h,i)perylene	**0.11**		**0.00092**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Benzo(k)fluoranthene	**0.069**		**0.0012**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	COMP-SB66-170908	Lab ID:HS17090397-01	
Collection Date:	08-Sep-2017 08:20	Matrix:Soil	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		**Method:SW8270**			Prep:SW3541 / 08-Sep-2017		Analyst: ACN
Bis(2-chloroethoxy)methane	U		0.0012	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Bis(2-chloroethyl)ether	U		0.0014	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Bis(2-chloroisopropyl)ether	U		0.0018	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Bis(2-ethylhexyl)phthalate	**0.079**		**0.0022**	**0.0087**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Butyl benzyl phthalate	**0.023**		**0.0017**	**0.0087**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Caprolactam	U		0.0016	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Carbazole	**0.018**		**0.0016**	**0.0087**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Chrysene	**0.13**		**0.0011**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Dibenz(a,h)anthracene	U		0.0021	0.0043	mg/Kg-dry	1	08-Sep-2017 23:39
Dibenzofuran	U		0.00092	0.0043	mg/Kg-dry	1	08-Sep-2017 23:39
Diethyl phthalate	U		0.0013	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Dimethyl phthalate	U		0.0011	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Di-n-butyl phthalate	**0.045**		**0.0016**	**0.0087**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Di-n-octyl phthalate	U		0.0012	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Fluoranthene	**0.21**		**0.0014**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Fluorene	**0.0042**	J	**0.0014**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Hexachlorobenzene	U		0.0012	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Hexachlorobutadiene	U		0.0016	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Hexachlorocyclopentadiene	U		0.0011	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Hexachloroethane	U		0.0020	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Indeno(1,2,3-cd)pyrene	**0.096**		**0.0011**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Isophorone	U		0.0011	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Naphthalene	**0.0037**	J	**0.00079**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Nitrobenzene	U		0.0012	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
N-Nitrosodi-n-propylamine	U		0.0014	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
N-Nitrosodiphenylamine	U		0.00092	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Pentachlorophenol	U		0.0043	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Phenanthrene	**0.080**		**0.0020**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Phenol	U		0.0014	0.0087	mg/Kg-dry	1	08-Sep-2017 23:39
Pyrene	**0.19**		**0.00079**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 23:39
Surr: 2,4,6-Tribromophenol	*56.3*			*36-126*	*%REC*	*1*	*08-Sep-2017 23:39*
Surr: 2-Fluorobiphenyl	*63.5*			*43-125*	*%REC*	*1*	*08-Sep-2017 23:39*
Surr: 2-Fluorophenol	*48.4*			*37-125*	*%REC*	*1*	*08-Sep-2017 23:39*
Surr: 4-Terphenyl-d14	*77.2*			*32-125*	*%REC*	*1*	*08-Sep-2017 23:39*
Surr: Nitrobenzene-d5	*53.7*			*37-125*	*%REC*	*1*	*08-Sep-2017 23:39*
Surr: Phenol-d6	*66.1*			*40-125*	*%REC*	*1*	*08-Sep-2017 23:39*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	COMP-SB66-170908	Lab ID:HS17090397-01	
Collection Date:	08-Sep-2017 08:20	Matrix:Soil	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
TEXAS TPH BY TX1005		**Method:TX1005**			Prep:TX1005PR / 08-Sep-2017		Analyst: JLJ
nC6 to nC12	U		13	66	mg/Kg-dry	1	08-Sep-2017 19:20
>nC12 to nC28	U		13	66	mg/Kg-dry	1	08-Sep-2017 19:20
>nC28 to nC35	U		13	66	mg/Kg-dry	1	08-Sep-2017 19:20
Total Petroleum Hydrocarbon	U		13	66	mg/Kg-dry	1	08-Sep-2017 19:20
Surr: 2-Fluorobiphenyl	*85.3*			*70-130*	*%REC*	*1*	*08-Sep-2017 19:20*
Surr: Trifluoromethyl benzene	*83.7*			*70-130*	*%REC*	*1*	*08-Sep-2017 19:20*
ORGANOCHLORINE PESTICIDES BY SW8081B		**Method:SW8081**			Prep:SW3541 / 08-Sep-2017		Analyst: JLJ
4,4´-DDD	U		0.00066	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
4,4´-DDE	U		0.00066	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
4,4´-DDT	**0.0011**	J	**0.00066**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 21:37
Aldrin	U		0.00039	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
alpha-BHC	U		0.00039	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
beta-BHC	**0.0012**	JP	**0.00039**	**0.0022**	**mg/Kg-dry**	1	08-Sep-2017 21:37
delta-BHC	U		0.00026	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
Dieldrin	**0.0011**	J	**0.00066**	**0.0043**	**mg/Kg-dry**	1	08-Sep-2017 21:37
Endosulfan I	U		0.00039	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
Endosulfan II	U		0.00079	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
Endosulfan sulfate	U		0.00079	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
Endrin	U		0.00079	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
Endrin aldehyde	U		0.00079	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
Endrin ketone	U		0.00079	0.0043	mg/Kg-dry	1	08-Sep-2017 21:37
gamma-BHC	U		0.00026	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
Heptachlor	U		0.00039	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
Heptachlor epoxide	U		0.00039	0.0022	mg/Kg-dry	1	08-Sep-2017 21:37
Methoxychlor	U		0.0045	0.022	mg/Kg-dry	1	08-Sep-2017 21:37
Toxaphene	U		0.0063	0.022	mg/Kg-dry	1	08-Sep-2017 21:37
Surr: Decachlorobiphenyl	*96.7*			*59-144*	*%REC*	*1*	*08-Sep-2017 21:37*
Surr: Tetrachloro-m-xylene	*103*			*56.9-130*	*%REC*	*1*	*08-Sep-2017 21:37*
MISCELLANEOUS PESTICIDES BY SW8081B		**Method:SW8081**			Prep:SW3541 / 08-Sep-2017		Analyst: JLJ
alpha-Chlordane	**0.0016**	JP	**0.00026**	**0.0022**	**mg/Kg-dry**	1	08-Sep-2017 21:37
gamma-Chlordane	**0.0021**	JP	**0.00026**	**0.0022**	**mg/Kg-dry**	1	08-Sep-2017 21:37

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	COMP-SB66-170908	Lab ID:HS17090397-01	
Collection Date:	08-Sep-2017 08:20	Matrix:Soil	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
CHLORINATED HERBICIDES BY SW8151A		**Method:SW8151**			Prep:SW8151 / 08-Sep-2017		Analyst: NPI
2,4,5-T	U		0.0018	0.0043	mg/Kg-dry	1	09-Sep-2017 11:57
2,4,5-TP (Silvex)	U		0.0022	0.0043	mg/Kg-dry	1	09-Sep-2017 11:57
2,4-D	U		0.00092	0.0087	mg/Kg-dry	1	09-Sep-2017 11:57
2,4-DB	U		0.0012	0.0087	mg/Kg-dry	1	09-Sep-2017 11:57
Dalapon	U		0.0016	0.0043	mg/Kg-dry	1	09-Sep-2017 11:57
Dicamba	U		0.0017	0.0043	mg/Kg-dry	1	09-Sep-2017 11:57
Dichlorprop	U		0.0021	0.0087	mg/Kg-dry	1	09-Sep-2017 11:57
Dinoseb	U		0.0018	0.0043	mg/Kg-dry	1	09-Sep-2017 11:57
MCPA	U		0.13	0.87	mg/Kg-dry	1	09-Sep-2017 11:57
MCPP	U		0.21	0.87	mg/Kg-dry	1	09-Sep-2017 11:57
Surr: DCAA	*39.6*			*30-150*	*%REC*	*1*	*09-Sep-2017 11:57*
METALS BY SW6020A		**Method:SW6020**			Prep:SW3050A / 08-Sep-2017		Analyst: RPM
Aluminum	**9,620**		**12.5**	**62.5**	**mg/Kg-dry**	50	08-Sep-2017 16:48
Antimony	**0.322**	J	**0.250**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Arsenic	**5.36**		**0.125**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Barium	**136**		**0.100**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Beryllium	**0.568**	J	**0.0625**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Boron	**8.51**		**1.75**	**3.13**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Cadmium	**0.202**	J	**0.0625**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Chromium	**16.4**		**0.113**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Cobalt	**4.34**		**0.0875**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Copper	**15.5**		**0.125**	**0.250**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Lead	**37.9**		**0.0625**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Manganese	**283**		**0.625**	**3.13**	**mg/Kg-dry**	5	08-Sep-2017 15:55
Nickel	**10.8**		**0.113**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Selenium	**1.67**		**0.225**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Silver	**0.126**	J	**0.100**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Thallium	**0.139**	J	**0.0875**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Vanadium	**23.0**		**0.288**	**0.625**	**mg/Kg-dry**	1	08-Sep-2017 15:23
Zinc	**265**		**1.56**	**3.13**	**mg/Kg-dry**	5	08-Sep-2017 15:55
MERCURY BY SW7471B		**Method:SW7471A**			Prep:SW7471A / 08-Sep-2017		Analyst: JC
Mercury	**0.0564**		**0.000674**	**0.00477**	**mg/Kg-dry**	1	08-Sep-2017 15:33
MOISTURE - ASTM D2216		**Method:ASTM D2216**					Analyst: DFF
Percent Moisture	**24.1**		**0.0100**	**0.0100**	**wt%**	1	08-Sep-2017 13:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC

ANALYTICAL REPORT

Project: USOR Post Harvey Soil 5040

WorkOrder:HS17090397

Sample ID: TB01-170908

Lab ID:HS17090397-02

Collection Date: 08-Sep-2017 10:15

Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**					Analyst: AKP
1,1,1,2-Tetrachloroethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
1,1,1-Trichloroethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
1,1,2,2-Tetrachloroethane	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:19
1,1,2-Trichlor-1,2,2-trifluoroethane	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:19
1,1,2-Trichloroethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
1,1-Dichloroethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
1,1-Dichloroethene	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
1,2,3-Trichlorobenzene	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:19
1,2,4-Trichlorobenzene	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:19
1,2,4-Trimethylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
1,2-Dibromoethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
1,2-Dichlorobenzene	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:19
1,2-Dichloroethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
1,2-Dichloropropane	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:19
1,3,5-Trimethylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
1,3-Dichlorobenzene	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:19
1,4-Dichlorobenzene	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:19
2-Butanone	U		0.00050	0.0020	mg/L	1	08-Sep-2017 17:19
2-Hexanone	U		0.0010	0.0020	mg/L	1	08-Sep-2017 17:19
4-Methyl-2-pentanone	U		0.00070	0.0020	mg/L	1	08-Sep-2017 17:19
Acetone	U		0.0020	0.0020	mg/L	1	08-Sep-2017 17:19
Benzene	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Bromodichloromethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Bromoform	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:19
Bromomethane	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:19
Carbon disulfide	U		0.00060	0.0020	mg/L	1	08-Sep-2017 17:19
Carbon tetrachloride	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:19
Chlorobenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Chloroethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Chloroform	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Chloromethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
cis-1,2-Dichloroethene	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
cis-1,3-Dichloropropene	U		0.00010	0.0010	mg/L	1	08-Sep-2017 17:19
Cyclohexane	U	n	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Dibromochloromethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Dichlorodifluoromethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Ethylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Isopropylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:19

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey Soil 5040	WorkOrder:HS17090397	
Sample ID:	TB01-170908	Lab ID:HS17090397-02	
Collection Date:	08-Sep-2017 10:15	Matrix:Water	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**					Analyst: AKP
Methyl acetate		U	0.0010	0.0010	mg/L	1	08-Sep-2017 17:19
Methyl tert-butyl ether		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Methylcyclohexane		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Methylene chloride		U	0.0010	0.0020	mg/L	1	08-Sep-2017 17:19
n-Butylbenzene		U	0.00040	0.0010	mg/L	1	08-Sep-2017 17:19
n-Propylbenzene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
sec-Butylbenzene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Styrene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
tert-Butylbenzene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Tetrachloroethene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Toluene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
trans-1,2-Dichloroethene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
trans-1,3-Dichloropropene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Trichloroethene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Trichlorofluoromethane		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Vinyl chloride		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:19
Xylenes, Total		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:19
Surr: 1,2-Dichloroethane-d4	*91.9*			*70-126*	*%REC*	*1*	*08-Sep-2017 17:19*
Surr: 4-Bromofluorobenzene	*96.5*			*81-113*	*%REC*	*1*	*08-Sep-2017 17:19*
Surr: Dibromofluoromethane	*103*			*77-123*	*%REC*	*1*	*08-Sep-2017 17:19*
Surr: Toluene-d8	*100*			*82-127*	*%REC*	*1*	*08-Sep-2017 17:19*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

Batch ID: 1910 **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS17090397-01	1	5.363 (g)	5 (mL)	0.93	TerraCore (5035A)

Batch ID: 119847 **Method:** MERCURY BY SW7471B **Prep:** HG_S_LOWPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090397-01	1	0.5511	40 (mL)	72.58

Batch ID: 119850 **Method:** METALS BY SW6020A **Prep:** 3050_I_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090397-01	1	0.527	50 (mL)	94.88

Batch ID: 119863 **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D **Prep:** 3541_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090397-01	1	30.08	1 (mL)	0.03324

Batch ID: 119864 **Method:** CHLORINATED HERBICIDES BY SW8151A **Prep:** 8151PRS

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090397-01	1	30.09	10 (mL)	0.3323

Batch ID: 119865 **Method:** MISCELLANEOUS PESTICIDES BY SW8081B **Prep:** PESTPR_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090397-01	1	30.07	10 (mL)	0.3326
HS17090397-01	1	30.07	10 (mL)	0.3326

Batch ID: 119866 **Method:** TEXAS TPH BY TX1005 **Prep:** TX 1005_S PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090397-01	1	10	10 (mL)	1

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 119847	**Test Name :** MERCURY BY SW7471B			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 09:07	08 Sep 2017 15:33	1
Batch ID 119850	**Test Name :** METALS BY SW6020A			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 09:57	08 Sep 2017 16:48	50
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 09:57	08 Sep 2017 15:55	5
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 09:57	08 Sep 2017 15:23	1
Batch ID 119863	**Test Name :** LOW-LEVEL SEMIVOLATILES BY 8270D			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 14:00	08 Sep 2017 23:39	1
Batch ID 119864	**Test Name :** CHLORINATED HERBICIDES BY SW8151A			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 14:09	09 Sep 2017 11:57	1
Batch ID 119865	**Test Name :** MISCELLANEOUS PESTICIDES BY SW8081B			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 14:13	08 Sep 2017 21:37	1
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 14:13	08 Sep 2017 21:37	1
Batch ID 119866	**Test Name :** TEXAS TPH BY TX1005			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20		08 Sep 2017 14:03	08 Sep 2017 19:20	1
Batch ID R301207	**Test Name :** VOLATILES BY SW8260C			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20			08 Sep 2017 12:46	1
Batch ID R301256	**Test Name :** MOISTURE - ASTM D2216			**Matrix:** Soil		
HS17090397-01	COMP-SB66-170908	08 Sep 2017 08:20			08 Sep 2017 13:29	1
Batch ID R301258	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Water		
HS17090397-02	TB01-170908	08 Sep 2017 10:15			08 Sep 2017 17:19	1

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119864 **Instrument: ECD_9** **Method: SW8151**

MBLK Sample ID: **MBLK-119864** Units: **ug/Kg** Analysis Date: **08-Sep-2017 23:03**
Client ID: Run ID: **ECD_9_301267** SeqNo: **4221800** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	U	3.3								
2,4,5-TP (Silvex)	U	3.3								
2,4-D	U	6.6								
2,4-DB	U	6.6								
Dalapon	U	3.3								
Dicamba	U	3.3								
Dichlorprop	U	6.6								
Dinoseb	U	3.3								
MCPA	U	660								
MCPP	U	660								
Surr: DCAA	*192.4*	*0*	*166.7*	*0*	*115*	*30 - 150*				

LCS Sample ID: **LCS-119864** Units: **ug/Kg** Analysis Date: **08-Sep-2017 23:35**
Client ID: Run ID: **ECD_9_301267** SeqNo: **4221801** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	84.83	3.3	83.33	0	102	50 - 150				
2,4,5-TP (Silvex)	91.49	3.3	83.33	0	110	50 - 150				
2,4-D	67.57	6.6	83.33	0	81.1	40 - 150				
2,4-DB	57.58	6.6	83.33	0	69.1	40 - 150				
Dalapon	79.37	3.3	83.33	0	95.2	30 - 150				
Dicamba	71	3.3	83.33	0	85.2	40 - 150				
Dichlorprop	72.02	6.6	83.33	0	86.4	40 - 150				
Dinoseb	44.86	3.3	83.33	0	53.8	40 - 150				
MCPA	7335	660	8333	0	88.0	40 - 150				
MCPP	7924	660	8333	0	95.1	40 - 150				
Surr: DCAA	*161.4*	*0*	*166.7*	*0*	*96.9*	*30 - 150*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119864 **Instrument: ECD_9** **Method: SW8151**

MS Sample ID: **HS17090255-01MS** Units: **ug/Kg** Analysis Date: **09-Sep-2017 00:38**
Client ID: Run ID: **ECD_9_301267** SeqNo: **4221803** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	91.08	3.3	83.17	0	110	50 - 150				
2,4,5-TP (Silvex)	101.6	3.3	83.17	0	122	50 - 150				
2,4-D	108.1	6.6	83.17	0	130	40 - 150				
2,4-DB	88.42	6.6	83.17	0	106	40 - 150				
Dalapon	34.21	3.3	83.17	0	41.1	30 - 150				
Dicamba	94.93	3.3	83.17	0	114	40 - 150				
Dichlorprop	90.16	6.6	83.17	0	108	40 - 150				
Dinoseb	99.51	3.3	83.17	0	120	40 - 150				
MCPA	8773	660	8317	0	105	40 - 150				
MCPP	8603	660	8317	0	103	40 - 150				
Surr: DCAA	*189.7*	*0*	*166.3*	*0*	*114*	*30 - 150*				

MSD Sample ID: **HS17090255-01MSD** Units: **ug/Kg** Analysis Date: **09-Sep-2017 01:10**
Client ID: Run ID: **ECD_9_301267** SeqNo: **4221804** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	92.47	3.3	83.22	0	111	50 - 150	91.08	1.52	30	
2,4,5-TP (Silvex)	102.8	3.3	83.22	0	124	50 - 150	101.6	1.21	30	
2,4-D	84.74	6.6	83.22	0	102	40 - 150	108.1	24.2	30	
2,4-DB	74.52	6.6	83.22	0	89.5	40 - 150	88.42	17.1	30	P
Dalapon	36.17	3.3	83.22	0	43.5	30 - 150	34.21	5.56	30	
Dicamba	96.6	3.3	83.22	0	116	40 - 150	94.93	1.74	30	
Dichlorprop	86.03	6.6	83.22	0	103	40 - 150	90.16	4.69	30	
Dinoseb	99.52	3.3	83.22	0	120	40 - 150	99.51	0.0127	30	
MCPA	7942	660	8322	0	95.4	40 - 150	8773	9.94	30	
MCPP	8740	660	8322	0	105	40 - 150	8603	1.58	30	
Surr: DCAA	*184.6*	*0*	*166.4*	*0*	*111*	*30 - 150*	*189.7*	*2.76*	*30*	

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119865 **Instrument: ECD_11** **Method: SW8081**

MBLK Sample ID: **MBLK-119865** Units: **ug/Kg** Analysis Date: **08-Sep-2017 20:57**
Client ID: Run ID: **ECD_11_301265** SeqNo: **4221786** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	U	3.3								
4,4´-DDE	U	3.3								
4,4´-DDT	U	3.3								
Aldrin	U	1.7								
alpha-BHC	U	1.7								
beta-BHC	U	1.7								
delta-BHC	U	1.7								
Dieldrin	U	3.3								
Endosulfan I	U	1.7								
Endosulfan II	U	3.3								
Endosulfan sulfate	U	3.3								
Endrin	U	3.3								
Endrin aldehyde	U	3.3								
Endrin ketone	U	3.3								
gamma-BHC	U	1.7								
Heptachlor	U	1.7								
Heptachlor epoxide	U	1.7								
Methoxychlor	U	17								
Toxaphene	U	17								
Surr: Decachlorobiphenyl	*5.753*	*0*	*6.667*	*0*	*86.3*	*59 - 144*				
Surr: Tetrachloro-m-xylene	*6.094*	*0*	*6.667*	*0*	*91.4*	*56.9 - 130*				

MBLK Sample ID: **MBLK-119865** Units: **ug/Kg** Analysis Date: **08-Sep-2017 20:57**
Client ID: Run ID: **ECD_11_301265** SeqNo: **4221791** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	U	1.7								
gamma-Chlordane	U	1.7								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119865 **Instrument: ECD_11** **Method: SW8081**

LCS Sample ID: **LCS-119865** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:17**
Client ID: Run ID: **ECD_11_301265** SeqNo: **4221787** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	16.08	3.3	16.67	0	96.5	53 - 138				
4,4´-DDE	14.4	3.3	16.67	0	86.4	57 - 136				
4,4´-DDT	15.65	3.3	16.67	0	93.9	53 - 139				
Aldrin	8.062	1.7	8.333	0	96.7	52 - 130				
alpha-BHC	8.185	1.7	8.333	0	98.2	52 - 130				
beta-BHC	7.992	1.7	8.333	0	95.9	62 - 130				
delta-BHC	5.413	1.7	8.333	0	65.0	41 - 137				
Dieldrin	15.43	3.3	16.67	0	92.6	54 - 138				
Endosulfan I	8.257	1.7	8.333	0	99.1	55 - 132				
Endosulfan II	15.26	3.3	16.67	0	91.6	59 - 134				
Endosulfan sulfate	15.16	3.3	16.67	0	90.9	54 - 141				
Endrin	16.04	3.3	16.67	0	96.3	60 - 157				
Endrin aldehyde	15.62	3.3	16.67	0	93.7	56 - 146				
Endrin ketone	15.52	3.3	16.67	0	93.1	56 - 153				
gamma-BHC	8.024	1.7	8.333	0	96.3	52 - 133				
Heptachlor	8.796	1.7	8.333	0	106	54 - 134				
Heptachlor epoxide	8.242	1.7	8.333	0	98.9	58 - 130				
Methoxychlor	77.98	17	83.3	0	93.6	60 - 140				
Surr: Decachlorobiphenyl	*5.821*	*0*	*6.667*	*0*	*87.3*	*59 - 144*				
Surr: Tetrachloro-m-xylene	*4.68*	*0*	*6.667*	*0*	*70.2*	*56.9 - 130*				

LCS Sample ID: **LCS-119865** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:17**
Client ID: Run ID: **ECD_11_301265** SeqNo: **4221792** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	7.855	1.7	8.333	0	94.3	55 - 132				
gamma-Chlordane	7.806	1.7	8.333	0	93.7	60 - 129				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119865 **Instrument: ECD_11** **Method: SW8081**

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:57**
Client ID: **COMP-SB66-170908** Run ID: **ECD_11_301265** SeqNo: **4221789** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	16.97	3.3	16.62	0	102	53 - 138				
4,4´-DDE	15.2	3.3	16.62	0.3705	89.3	57 - 136				
4,4´-DDT	18.99	3.3	16.62	0.8447	109	53 - 139				
Aldrin	8.191	1.7	8.308	0	98.6	52 - 130				
alpha-BHC	8.995	1.7	8.308	0	108	52 - 130				
beta-BHC	8.065	1.7	8.308	0.9405	85.8	62 - 130				
delta-BHC	4.559	1.7	8.308	0	54.9	41 - 137				
Dieldrin	16.89	3.3	16.62	0.8523	96.5	54 - 138				
Endosulfan I	6.717	1.7	8.308	0	80.8	55 - 132				
Endosulfan II	16.3	3.3	16.62	0	98.1	59 - 134				
Endosulfan sulfate	15.31	3.3	16.62	0	92.1	54 - 141				
Endrin	18.31	3.3	16.62	0	110	60 - 157				
Endrin aldehyde	16.66	3.3	16.62	0	100	56 - 146				
Endrin ketone	17.26	3.3	16.62	0	104	56 - 153				
gamma-BHC	9.067	1.7	8.308	0	109	52 - 133				
Heptachlor	10.27	1.7	8.308	0	124	54 - 134				
Heptachlor epoxide	9.391	1.7	8.308	0.1733	111	58 - 130				
Methoxychlor	101.6	17	83.05	0	122	60 - 140				
Surr: Decachlorobiphenyl	*6.085*	*0*	*6.647*	*0*	*91.6*	*59 - 144*				
Surr: Tetrachloro-m-xylene	*6.567*	*0*	*6.647*	*0*	*98.8*	*56.9 - 130*				

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:57**
Client ID: **COMP-SB66-170908** Run ID: **ECD_11_301265** SeqNo: **4221794** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	8.886	1.7	8.308	1.205	92.5	55 - 132				
gamma-Chlordane	8.341	1.7	8.308	1.629	80.8	60 - 129				P

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119865 **Instrument: ECD_11** **Method: SW8081**

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 22:17**
Client ID: **COMP-SB66-170908** Run ID: **ECD_11_301265** SeqNo: **4221790** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	17.93	3.3	16.64	0	108	53 - 138	16.97	5.48	30	
4,4´-DDE	15.73	3.3	16.64	0.3705	92.3	57 - 136	15.2	3.42	30	
4,4´-DDT	18.17	3.3	16.64	0.8447	104	53 - 139	18.99	4.41	30	
Aldrin	8.353	1.7	8.322	0	100	52 - 130	8.191	1.96	30	
alpha-BHC	8.982	1.7	8.322	0	108	52 - 130	8.995	0.141	30	
beta-BHC	8.024	1.7	8.322	0.9405	85.1	62 - 130	8.065	0.52	30	
delta-BHC	4.62	1.7	8.322	0	55.5	41 - 137	4.559	1.31	30	
Dieldrin	16.97	3.3	16.64	0.8523	96.8	54 - 138	16.89	0.5	30	
Endosulfan I	6.853	1.7	8.322	0	82.3	55 - 132	6.717	2.01	30	
Endosulfan II	16.44	3.3	16.64	0	98.7	59 - 134	16.3	0.802	30	
Endosulfan sulfate	15.37	3.3	16.64	0	92.3	54 - 141	15.31	0.387	30	
Endrin	18.79	3.3	16.64	0	113	60 - 157	18.31	2.61	30	
Endrin aldehyde	16.75	3.3	16.64	0	101	56 - 146	16.66	0.507	30	
Endrin ketone	17.04	3.3	16.64	0	102	56 - 153	17.26	1.29	30	
gamma-BHC	9.22	1.7	8.322	0	111	52 - 133	9.067	1.68	30	
Heptachlor	10.25	1.7	8.322	0	123	54 - 134	10.27	0.265	30	
Heptachlor epoxide	9.147	1.7	8.322	0.1733	108	58 - 130	9.391	2.63	30	
Methoxychlor	98.83	17	83.19	0	119	60 - 140	101.6	2.73	30	
Surr: Decachlorobiphenyl	*5.991*	*0*	*6.658*	*0*	*90.0*	*59 - 144*	*6.085*	*1.56*	*30*	
Surr: Tetrachloro-m-xylene	*6.593*	*0*	*6.658*	*0*	*99.0*	*56.9 - 130*	*6.567*	*0.384*	*30*	

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 22:17**
Client ID: **COMP-SB66-170908** Run ID: **ECD_11_301265** SeqNo: **4221795** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	8.977	1.7	8.322	1.205	93.4	55 - 132	8.886	1.02	30	
gamma-Chlordane	8.472	1.7	8.322	1.629	82.2	60 - 129	8.341	1.56	30	P

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119866 **Instrument: FID-11** **Method: TX1005**

MBLK Sample ID: **MBLK-119866** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:29**
Client ID: Run ID: **FID-11_301263** SeqNo: **4221771** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	U	50								
>nC12 to nC28	U	50								
>nC28 to nC35	U	50								
Total Petroleum Hydrocarbon	U	50								
Surr: 2-Fluorobiphenyl	*20.09*	*0*	*25*	*0*	*80.4*	*70 - 130*				
Surr: Trifluoromethyl benzene	*19.77*	*0*	*25*	*0*	*79.1*	*70 - 130*				

LCS Sample ID: **LCS-119866** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:58**
Client ID: Run ID: **FID-11_301263** SeqNo: **4221772** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	264.2	50	250	0	106	75 - 125				
>nC12 to nC28	278.8	50	250	0	112	75 - 125				
Surr: 2-Fluorobiphenyl	*25.94*	*0*	*25*	*0*	*104*	*70 - 130*				
Surr: Trifluoromethyl benzene	*24.89*	*0*	*25*	*0*	*99.6*	*70 - 130*				

LCSD Sample ID: **LCSD-119866** Units: **mg/Kg** Analysis Date: **08-Sep-2017 17:26**
Client ID: Run ID: **FID-11_301263** SeqNo: **4221773** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	276.2	50	250	0	110	75 - 125	264.2	4.46	20	
>nC12 to nC28	279	50	250	0	112	75 - 125	278.8	0.0663	20	
Surr: 2-Fluorobiphenyl	*27.21*	*0*	*25*	*0*	*109*	*70 - 130*	*25.94*	*4.79*	*20*	
Surr: Trifluoromethyl benzene	*25.87*	*0*	*25*	*0*	*103*	*70 - 130*	*24.89*	*3.83*	*20*	

MS Sample ID: **HS17090333-06MS** Units: **mg/Kg** Analysis Date: **08-Sep-2017 18:23**
Client ID: Run ID: **FID-11_301263** SeqNo: **4221775** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	257.6	50	250	0	103	75 - 125				
>nC12 to nC28	281.6	50	250	0	113	75 - 125				
Surr: 2-Fluorobiphenyl	*23.44*	*0*	*25*	*0*	*93.8*	*70 - 130*				
Surr: Trifluoromethyl benzene	*20.92*	*0*	*25*	*0*	*83.7*	*70 - 130*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119866 **Instrument: FID-11** **Method: TX1005**

MSD Sample ID: **HS17090333-06MSD** Units: **mg/Kg** Analysis Date: **08-Sep-2017 18:52**
Client ID: Run ID: **FID-11_301263** SeqNo: **4221776** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	273	50	250	0	109	75 - 125	257.6	5.81	20	
>nC12 to nC28	274.9	50	250	0	110	75 - 125	281.6	2.38	20	
Surr: 2-Fluorobiphenyl	*22.84*	*0*	*25*	*0*	*91.3*	*70 - 130*	*23.44*	*2.62*	*20*	
Surr: Trifluoromethyl benzene	*22.07*	*0*	*25*	*0*	*88.3*	*70 - 130*	*20.92*	*5.33*	*20*	

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119847 **Instrument: HG02** **Method: SW7471A**

MBLK Sample ID: **MBLK-119847** Units: **ug/Kg** Analysis Date: **08-Sep-2017 15:01**
Client ID: Run ID: **HG02_301236** SeqNo: **4221269** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	3.40								

LCS Sample ID: **LCS-119847** Units: **ug/Kg** Analysis Date: **08-Sep-2017 15:04**
Client ID: Run ID: **HG02_301236** SeqNo: **4221270** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	361.1	3.42	343.3	0	105	85 - 115				

MS Sample ID: **HS17090333-15MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 15:30**
Client ID: Run ID: **HG02_301236** SeqNo: **4221282** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	345.4	3.48	348.9	1.415	98.6	85 - 115				

MSD Sample ID: **HS17090333-15MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 15:32**
Client ID: Run ID: **HG02_301236** SeqNo: **4221283** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	335.9	3.51	352	1.415	95.0	85 - 115	345.4	2.81	20	

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119850 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-119850** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:42**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221636** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.9011	1.00								J

MBLK Sample ID: **MBLK-119850** Units: **mg/Kg** Analysis Date: **08-Sep-2017 15:14**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221303** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.500								
Arsenic	U	0.500								
Barium	U	0.500								
Beryllium	U	0.500								
Boron	U	2.50								
Cadmium	U	0.500								
Chromium	U	0.500								
Cobalt	U	0.500								
Copper	U	0.200								
Lead	U	0.500								
Manganese	U	0.500								
Nickel	U	0.500								
Selenium	U	0.500								
Silver	U	0.500								
Thallium	U	0.500								
Vanadium	U	0.500								
Zinc	U	0.500								

LCS Sample ID: **LCS-119850** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:45**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221637** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	55.19	1.00	60	0	92.0	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119850 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-119850** Units: **mg/Kg** Analysis Date: **08-Sep-2017 15:18**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221304** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	10.04	0.500	10	0	100	80 - 120				
Arsenic	9.448	0.500	10	0	94.5	80 - 120				
Barium	9.264	0.500	10	0	92.6	80 - 120				
Beryllium	9.373	0.500	10	0	93.7	80 - 120				
Boron	45.69	2.50	50	0	91.4	80 - 120				
Cadmium	9.301	0.500	10	0	93.0	80 - 120				
Chromium	9.742	0.500	10	0	97.4	80 - 120				
Cobalt	9.669	0.500	10	0	96.7	80 - 120				
Copper	9.569	0.200	10	0	95.7	80 - 120				
Lead	9.216	0.500	10	0	92.2	80 - 120				
Manganese	9.781	0.500	10	0	97.8	80 - 120				
Nickel	9.504	0.500	10	0	95.0	80 - 120				
Selenium	10	0.500	10	0	100	80 - 120				
Silver	9.802	0.500	10	0	98.0	80 - 120				
Thallium	9.301	0.500	10	0	93.0	80 - 120				
Vanadium	9.617	0.500	10	0	96.2	80 - 120				
Zinc	9.619	0.500	10	0	96.2	80 - 120				

MS Sample ID: **HS17090378-05MS** Units: **mg/Kg** Analysis Date: **08-Sep-2017 17:06**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221645** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1878	0.930	55.79	1891	-22.0	75 - 125				SEO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119850 **Instrument: ICPMS05** **Method: SW6020**

MS Sample ID: **HS17090378-05MS** Units: **mg/Kg** Analysis Date: **08-Sep-2017 15:36**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221308** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.747	0.465	9.299	0.02097	61.6	75 - 125				S
Arsenic	8.422	0.465	9.299	0.4314	85.9	75 - 125				
Barium	20.99	0.465	9.299	17.16	41.2	75 - 125				S
Beryllium	9.102	0.465	9.299	0.444	93.1	75 - 125				
Boron	42.23	2.32	46.49	1.147	88.4	75 - 125				
Cadmium	8.605	0.465	9.299	0.004288	92.5	75 - 125				
Chromium	10.87	0.465	9.299	2.413	90.9	75 - 125				
Cobalt	9.735	0.465	9.299	1.653	86.9	75 - 125				
Copper	9.915	0.186	9.299	1.708	88.3	75 - 125				
Lead	10.17	0.465	9.299	1.662	91.5	75 - 125				
Manganese	20.44	0.465	9.299	15.35	54.7	75 - 125				S
Nickel	12.38	0.465	9.299	4.921	80.2	75 - 125				
Selenium	9.329	0.465	9.299	1.467	84.6	75 - 125				
Silver	8.78	0.465	9.299	0.003169	94.4	75 - 125				
Thallium	8.727	0.465	9.299	0.05155	93.3	75 - 125				
Vanadium	11.07	0.465	9.299	3.068	86.0	75 - 125				
Zinc	12.49	0.465	9.299	4.505	85.9	75 - 125				

MSD Sample ID: **HS17090378-05MSD** Units: **mg/Kg** Analysis Date: **08-Sep-2017 17:09**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221646** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1914	0.911	54.68	1891	42.3	75 - 125	1878	1.87	20	SEO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119850 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS17090378-05MSD** Units: **mg/Kg** Analysis Date: **08-Sep-2017 15:41**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221309** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.865	0.456	9.114	0.02097	64.1	75 - 125	5.747	2.03	20	S
Arsenic	8.58	0.456	9.114	0.4314	89.4	75 - 125	8.422	1.86	20	
Barium	60.83	0.456	9.114	17.16	479	75 - 125	20.99	97.4	20	SR
Beryllium	9.107	0.456	9.114	0.444	95.0	75 - 125	9.102	0.0487	20	
Boron	42.57	2.28	45.57	1.147	90.9	75 - 125	42.23	0.812	20	
Cadmium	8.53	0.456	9.114	0.004288	93.5	75 - 125	8.605	0.878	20	
Chromium	11.04	0.456	9.114	2.413	94.6	75 - 125	10.87	1.55	20	
Cobalt	10.01	0.456	9.114	1.653	91.7	75 - 125	9.735	2.84	20	
Copper	10.22	0.182	9.114	1.708	93.4	75 - 125	9.915	3.06	20	
Lead	10.44	0.456	9.114	1.662	96.3	75 - 125	10.17	2.6	20	
Manganese	22.65	0.456	9.114	15.35	80.1	75 - 125	20.44	10.3	20	
Nickel	12.94	0.456	9.114	4.921	88.0	75 - 125	12.38	4.39	20	
Selenium	9.317	0.456	9.114	1.467	86.1	75 - 125	9.329	0.136	20	
Silver	8.821	0.456	9.114	0.003169	96.8	75 - 125	8.78	0.473	20	
Thallium	8.816	0.456	9.114	0.05155	96.2	75 - 125	8.727	1.02	20	
Vanadium	11.3	0.456	9.114	3.068	90.3	75 - 125	11.07	2.06	20	
Zinc	12.96	0.456	9.114	4.505	92.8	75 - 125	12.49	3.67	20	

PDS Sample ID: **HS17090378-05PDS** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:55**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221641** PrepDate: **08-Sep-2017** DF: **10**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	2286	9.32	93.21	2204	87.5	75 - 125				EO

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119850 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS17090378-05PDS** Units: **mg/Kg** Analysis Date: **08-Sep-2017 15:45**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221310** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	8.711	0.466	9.321	0.02097	93.2	75 - 125				
Arsenic	8.698	0.466	9.321	0.4314	88.7	75 - 125				
Barium	25.53	0.466	9.321	17.16	89.7	75 - 125				
Beryllium	8.269	0.466	9.321	0.444	83.9	75 - 125				
Boron	77.59	2.33	93.21	1.147	82.0	75 - 125				
Cadmium	8.469	0.466	9.321	0.004288	90.8	75 - 125				
Chromium	10.79	0.466	9.321	2.413	89.8	75 - 125				
Cobalt	9.938	0.466	9.321	1.653	88.9	75 - 125				
Copper	10.02	0.186	9.321	1.708	89.2	75 - 125				
Lead	10.17	0.466	9.321	1.662	91.2	75 - 125				
Manganese	23.37	0.466	9.321	15.35	86.0	75 - 125				
Nickel	12.98	0.466	9.321	4.921	86.5	75 - 125				
Selenium	9.539	0.466	9.321	1.467	86.6	75 - 125				
Silver	8.787	0.466	9.321	0.003169	94.2	75 - 125				
Thallium	8.769	0.466	9.321	0.05155	93.5	75 - 125				
Vanadium	11.37	0.466	9.321	3.068	89.1	75 - 125				
Zinc	12.66	0.466	9.321	4.505	87.5	75 - 125				

SD Sample ID: **HS17090378-05SD** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:53**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221640** PrepDate: **08-Sep-2017** DF: **50**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	2004	46.6					2204	9.06	10	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119850 **Instrument: ICPMS05** **Method: SW6020**

SD Sample ID: **HS17090378-05SD** Units: **mg/Kg** Analysis Date: **08-Sep-2017 15:32**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221307** PrepDate: **08-Sep-2017** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	U	2.33					0.02097	0	10	
Arsenic	U	2.33					0.4314	0	10	
Barium	18.21	2.33					17.16	6.09	10	
Beryllium	0.4758	2.33					0.444	0	10	J
Boron	U	11.7					1.147	0	10	
Cadmium	U	2.33					0.004288	0	10	
Chromium	2.683	2.33					2.413	11.2	10	R
Cobalt	1.816	2.33					1.653	0	10	J
Copper	1.611	0.932					1.708	5.68	10	
Lead	1.731	2.33					1.662	0	10	J
Nickel	5.309	2.33					4.921	7.87	10	
Selenium	1.391	2.33					1.467	0	10	J
Silver	U	2.33					0.003169	0	10	
Thallium	U	2.33					0.05155	0	10	
Vanadium	3.64	2.33					3.068	18.6	10	R
Zinc	4.995	2.33					4.505	10.9	10	R

SD Sample ID: **HS17090378-05SD** Units: **mg/Kg** Analysis Date: **08-Sep-2017 16:15**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221419** PrepDate: **08-Sep-2017** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Manganese	16.42	2.33					15.35	6.95	10	

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-119863** Units: **ug/Kg** Analysis Date: **08-Sep-2017 19:13**
Client ID: Run ID: **SV-6_301261** SeqNo: **4221742** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	U	6.6								
1,2,4,5-Tetrachlorobenzene	U	6.6								
1,4-Dioxane	U	6.6								
1-Methylnaphthalene	U	3.3								
2,3,4,6-Tetrachlorophenol	U	6.6								
2,4,5-Trichlorophenol	U	6.6								
2,4,6-Trichlorophenol	U	6.6								
2,4-Dichlorophenol	U	6.6								
2,4-Dimethylphenol	U	6.6								
2,4-Dinitrophenol	U	13								
2,4-Dinitrotoluene	U	6.6								
2,6-Dinitrotoluene	U	6.6								
2-Chloronaphthalene	U	6.6								
2-Chlorophenol	U	6.6								
2-Methylnaphthalene	U	3.3								
2-Methylphenol	U	6.6								
2-Nitroaniline	U	6.6								
2-Nitrophenol	U	6.6								
3&4-Methylphenol	U	6.6								
3,3´-Dichlorobenzidine	U	6.6								
3-Nitroaniline	U	6.6								
4,6-Dinitro-2-methylphenol	U	6.6								
4-Bromophenyl phenyl ether	U	6.6								
4-Chloro-3-methylphenol	U	6.6								
4-Chlorophenyl phenyl ether	U	6.6								
4-Nitroaniline	U	6.6								
4-Nitrophenol	U	13								
Acenaphthene	U	3.3								
Acenaphthylene	U	3.3								
Acetophenone	U	6.6								
Anthracene	U	3.3								
Atrazine	U	6.6								
Benz(a)anthracene	U	3.3								
Benzaldehyde	U	6.6								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-119863** Units: **ug/Kg** Analysis Date: **08-Sep-2017 19:13**
Client ID: Run ID: **SV-6_301261** SeqNo: **4221742** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	U	3.3								
Benzo(b)fluoranthene	U	3.3								
Benzo(g,h,i)perylene	U	3.3								
Benzo(k)fluoranthene	U	3.3								
Bis(2-chloroethoxy)methane	U	6.6								
Bis(2-chloroethyl)ether	U	6.6								
Bis(2-chloroisopropyl)ether	U	6.6								
Bis(2-ethylhexyl)phthalate	U	6.6								
Butyl benzyl phthalate	U	6.6								
Caprolactam	U	6.6								
Carbazole	U	6.6								
Chrysene	U	3.3								
Dibenz(a,h)anthracene	U	3.3								
Dibenzofuran	U	3.3								
Diethyl phthalate	U	6.6								
Dimethyl phthalate	U	6.6								
Di-n-butyl phthalate	U	6.6								
Di-n-octyl phthalate	U	6.6								
Fluoranthene	U	3.3								
Fluorene	U	3.3								
Hexachlorobenzene	U	6.6								
Hexachlorobutadiene	U	6.6								
Hexachlorocyclopentadiene	U	6.6								
Hexachloroethane	U	6.6								
Indeno(1,2,3-cd)pyrene	U	3.3								
Isophorone	U	6.6								
Naphthalene	U	3.3								
Nitrobenzene	U	6.6								
N-Nitrosodi-n-propylamine	U	6.6								
N-Nitrosodiphenylamine	U	6.6								
Pentachlorophenol	U	6.6								
Phenanthrene	U	3.3								
Phenol	U	6.6								
Pyrene	U	3.3								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-119863** Units: **ug/Kg** Analysis Date: **08-Sep-2017 19:13**
Client ID: Run ID: **SV-6_301261** SeqNo: **4221742** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*88.3*	*0*	*167*	*0*	*52.9*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*121.5*	*0*	*167*	*0*	*72.8*	*43 - 125*				
Surr: 2-Fluorophenol	*123.7*	*0*	*167*	*0*	*74.1*	*37 - 125*				
Surr: 4-Terphenyl-d14	*138.4*	*0*	*167*	*0*	*82.9*	*32 - 125*				
Surr: Nitrobenzene-d5	*132.2*	*0*	*167*	*0*	*79.1*	*37 - 125*				
Surr: Phenol-d6	*147.8*	*0*	*167*	*0*	*88.5*	*40 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-119863** Units: **ug/Kg** Analysis Date: **08-Sep-2017 19:32**
Client ID: Run ID: **SV-6_301261** SeqNo: **4221743** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	116.3	6.6	167	0	69.6	50 - 120				
1,2,4,5-Tetrachlorobenzene	121.8	6.6	167	0	72.9	40 - 140				
1,4-Dioxane	77.04	6.6	167	0	46.1	40 - 140				
1-Methylnaphthalene	113.1	3.3	167	0	67.7	50 - 120				
2,3,4,6-Tetrachlorophenol	115	6.6	167	0	68.8	40 - 140				
2,4,5-Trichlorophenol	124.1	6.6	167	0	74.3	45 - 127				
2,4,6-Trichlorophenol	122.3	6.6	167	0	73.2	45 - 130				
2,4-Dichlorophenol	119	6.6	167	0	71.3	45 - 125				
2,4-Dimethylphenol	123.8	6.6	167	0	74.1	45 - 120				
2,4-Dinitrophenol	107.7	13	167	0	64.5	10 - 126				
2,4-Dinitrotoluene	113.4	6.6	167	0	67.9	50 - 130				
2,6-Dinitrotoluene	121	6.6	167	0	72.4	50 - 125				
2-Chloronaphthalene	121.7	6.6	167	0	72.9	50 - 145				
2-Chlorophenol	107.7	6.6	167	0	64.5	45 - 120				
2-Methylnaphthalene	108	3.3	167	0	64.6	50 - 120				
2-Methylphenol	120.7	6.6	167	0	72.3	45 - 120				
2-Nitroaniline	174.9	6.6	167	0	105	45 - 138				
2-Nitrophenol	101.8	6.6	167	0	60.9	45 - 125				
3&4-Methylphenol	107.4	6.6	167	0	64.3	45 - 120				
3,3´-Dichlorobenzidine	186.9	6.6	167	0	112	15 - 120				
3-Nitroaniline	111.2	6.6	167	0	66.6	40 - 120				
4,6-Dinitro-2-methylphenol	94.85	6.6	167	0	56.8	15 - 135				
4-Bromophenyl phenyl ether	101.7	6.6	167	0	60.9	50 - 125				
4-Chloro-3-methylphenol	115.2	6.6	167	0	69.0	45 - 130				
4-Chlorophenyl phenyl ether	107.7	6.6	167	0	64.5	50 - 120				
4-Nitroaniline	129.3	6.6	167	0	77.4	50 - 127				
4-Nitrophenol	109.6	13	167	0	65.6	40 - 147				
Acenaphthene	123.2	3.3	167	0	73.8	50 - 120				
Acenaphthylene	121.6	3.3	167	0	72.8	50 - 120				
Acetophenone	86.5	6.6	167	0	51.8	50 - 120				
Anthracene	113.9	3.3	167	0	68.2	50 - 123				
Atrazine	100.6	6.6	167	0	60.2	29 - 148				
Benz(a)anthracene	122	3.3	167	0	73.0	50 - 131				
Benzaldehyde	49.4	6.6	167	0	29.6	22 - 129				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-119863** Units: **ug/Kg** Analysis Date: **08-Sep-2017 19:32**
Client ID: Run ID: **SV-6_301261** SeqNo: **4221743** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	114.2	3.3	167	0	68.4	50 - 130				
Benzo(b)fluoranthene	125.4	3.3	167	0	75.1	50 - 137				
Benzo(g,h,i)perylene	128.3	3.3	167	0	76.8	50 - 130				
Benzo(k)fluoranthene	111.8	3.3	167	0	67.0	50 - 143				
Bis(2-chloroethoxy)methane	106.1	6.6	167	0	63.6	50 - 120				
Bis(2-chloroethyl)ether	119.6	6.6	167	0	71.6	45 - 127				
Bis(2-chloroisopropyl)ether	106	6.6	167	0	63.5	50 - 120				
Bis(2-ethylhexyl)phthalate	146.2	6.6	167	0	87.5	21 - 148				
Butyl benzyl phthalate	140.7	6.6	167	0	84.3	50 - 136				
Caprolactam	130.9	6.6	167	0	78.4	50 - 135				
Carbazole	120.4	6.6	167	0	72.1	50 - 143				
Chrysene	124.9	3.3	167	0	74.8	50 - 130				
Dibenz(a,h)anthracene	125	3.3	167	0	74.8	50 - 130				
Dibenzofuran	123.6	3.3	167	0	74.0	50 - 125				
Diethyl phthalate	122.2	6.6	167	0	73.2	50 - 125				
Dimethyl phthalate	123.4	6.6	167	0	73.9	50 - 125				
Di-n-butyl phthalate	132.1	6.6	167	0	79.1	50 - 140				
Di-n-octyl phthalate	145.2	6.6	167	0	86.9	50 - 140				
Fluoranthene	119.1	3.3	167	0	71.3	50 - 131				
Fluorene	119.4	3.3	167	0	71.5	50 - 125				
Hexachlorobenzene	135.9	6.6	167	0	81.4	50 - 124				
Hexachlorobutadiene	93.26	6.6	167	0	55.8	50 - 125				
Hexachlorocyclopentadiene	87.75	6.6	167	0	52.5	45 - 135				
Hexachloroethane	114.6	6.6	167	0	68.6	45 - 125				
Indeno(1,2,3-cd)pyrene	122.4	3.3	167	0	73.3	45 - 139				
Isophorone	94.47	6.6	167	0	56.6	45 - 130				
Naphthalene	117.8	3.3	167	0	70.6	50 - 125				
Nitrobenzene	108.7	6.6	167	0	65.1	50 - 125				
N-Nitrosodi-n-propylamine	109.9	6.6	167	0	65.8	45 - 120				
N-Nitrosodiphenylamine	115.7	6.6	167	0	69.3	50 - 130				
Pentachlorophenol	105.7	6.6	167	0	63.3	23 - 136				
Phenanthrene	114.7	3.3	167	0	68.7	50 - 125				
Phenol	119.1	6.6	167	0	71.3	45 - 130				
Pyrene	135.5	3.3	167	0	81.1	45 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-119863** Units: **ug/Kg** Analysis Date: **08-Sep-2017 19:32**
Client ID: Run ID: **SV-6_301261** SeqNo: **4221743** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*108*	*0*	*167*	*0*	*64.6*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*127.4*	*0*	*167*	*0*	*76.3*	*43 - 125*				
Surr: 2-Fluorophenol	*128.4*	*0*	*167*	*0*	*76.9*	*37 - 125*				
Surr: 4-Terphenyl-d14	*135*	*0*	*167*	*0*	*80.8*	*32 - 125*				
Surr: Nitrobenzene-d5	*119.3*	*0*	*167*	*0*	*71.5*	*37 - 125*				
Surr: Phenol-d6	*126.2*	*0*	*167*	*0*	*75.6*	*40 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:26**
Client ID: **COMP-SB66-170908** Run ID: **SV-6_301261** SeqNo: **4221744** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	89.57	6.6	166.8	0	53.7	50 - 120				
1,2,4,5-Tetrachlorobenzene	102	6.6	166.8	0	61.1	40 - 140				
1,4-Dioxane	39.9	6.6	166.8	0	23.9	40 - 140				S
1-Methylnaphthalene	83.52	3.3	166.8	0	50.1	50 - 120				
2,3,4,6-Tetrachlorophenol	122.2	6.6	166.8	0	73.2	40 - 140				
2,4,5-Trichlorophenol	106.2	6.6	166.8	0	63.7	45 - 127				
2,4,6-Trichlorophenol	84.06	6.6	166.8	0	50.4	45 - 130				
2,4-Dichlorophenol	76.86	6.6	166.8	0	46.1	45 - 125				
2,4-Dimethylphenol	82.5	6.6	166.8	0	49.5	45 - 120				
2,4-Dinitrophenol	23.24	13	166.8	0	13.9	10 - 126				
2,4-Dinitrotoluene	110.5	6.6	166.8	0	66.2	50 - 130				
2,6-Dinitrotoluene	99.82	6.6	166.8	0	59.9	50 - 125				
2-Chloronaphthalene	96.78	6.6	166.8	0	58.0	50 - 145				
2-Chlorophenol	65.16	6.6	166.8	0	39.1	45 - 120				S
2-Methylnaphthalene	91.6	3.3	166.8	2.84	53.2	50 - 120				
2-Methylphenol	95.53	6.6	166.8	0	57.3	45 - 120				
2-Nitroaniline	161.2	6.6	166.8	0	96.7	45 - 138				
2-Nitrophenol	78.73	6.6	166.8	0	47.2	45 - 125				
3&4-Methylphenol	93.32	6.6	166.8	0	56.0	45 - 120				
3,3´-Dichlorobenzidine	44.31	6.6	166.8	0	26.6	15 - 120				
3-Nitroaniline	103.1	6.6	166.8	0	61.8	40 - 120				
4,6-Dinitro-2-methylphenol	47.71	6.6	166.8	0	28.6	15 - 135				
4-Bromophenyl phenyl ether	104.6	6.6	166.8	0	62.7	50 - 125				
4-Chloro-3-methylphenol	118.4	6.6	166.8	0	71.0	45 - 130				
4-Chlorophenyl phenyl ether	103.7	6.6	166.8	0	62.2	50 - 120				
4-Nitroaniline	108.6	6.6	166.8	0	65.1	50 - 127				
4-Nitrophenol	96.81	13	166.8	0	58.0	40 - 147				
Acenaphthene	93.97	3.3	166.8	0	56.3	50 - 120				
Acenaphthylene	101.4	3.3	166.8	3.109	59.0	50 - 120				
Acetophenone	60.13	6.6	166.8	0	36.1	50 - 120				S
Anthracene	129.6	3.3	166.8	12.27	70.3	50 - 123				
Atrazine	96.41	6.6	166.8	0	57.8	29 - 148				
Benz(a)anthracene	187.1	3.3	166.8	78.43	65.2	50 - 131				
Benzaldehyde	11.91	6.6	166.8	0	7.14	22 - 129				S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:26**
Client ID: **COMP-SB66-170908** Run ID: **SV-6_301261** SeqNo: **4221744** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	169.1	3.3	166.8	94.21	44.9	50 - 130				S
Benzo(b)fluoranthene	186.2	3.3	166.8	126.2	36.0	50 - 137				S
Benzo(g,h,i)perylene	163.8	3.3	166.8	80	50.3	50 - 130				
Benzo(k)fluoranthene	145	3.3	166.8	52.43	55.5	50 - 143				
Bis(2-chloroethoxy)methane	85.49	6.6	166.8	0	51.3	50 - 120				
Bis(2-chloroethyl)ether	70.37	6.6	166.8	0	42.2	45 - 127				S
Bis(2-chloroisopropyl)ether	75.31	6.6	166.8	0	45.2	50 - 120				S
Bis(2-ethylhexyl)phthalate	192.1	6.6	166.8	60.25	79.1	21 - 148				
Butyl benzyl phthalate	138.7	6.6	166.8	17.2	72.8	50 - 136				
Caprolactam	123.3	6.6	166.8	0	73.9	50 - 135				
Carbazole	145.1	6.6	166.8	13.62	78.9	50 - 143				
Chrysene	212.3	3.3	166.8	96.75	69.3	50 - 130				
Dibenz(a,h)anthracene	135.1	3.3	166.8	0	81.0	50 - 130				
Dibenzofuran	96.96	3.3	166.8	0	58.1	50 - 125				
Diethyl phthalate	109.1	6.6	166.8	0	65.4	50 - 125				
Dimethyl phthalate	99.75	6.6	166.8	0	59.8	50 - 125				
Di-n-butyl phthalate	153.1	6.6	166.8	34.07	71.4	50 - 140				
Di-n-octyl phthalate	131.4	6.6	166.8	0	78.8	50 - 140				
Fluoranthene	245.3	3.3	166.8	155.9	53.6	50 - 131				
Fluorene	112.3	3.3	166.8	3.215	65.4	50 - 125				
Hexachlorobenzene	132.3	6.6	166.8	0	79.3	50 - 124				
Hexachlorobutadiene	70.86	6.6	166.8	0	42.5	50 - 125				S
Hexachlorocyclopentadiene	15.12	6.6	166.8	0	9.07	45 - 135				S
Hexachloroethane	59.76	6.6	166.8	0	35.8	45 - 125				S
Indeno(1,2,3-cd)pyrene	176.1	3.3	166.8	72.7	62.0	45 - 139				
Isophorone	85.88	6.6	166.8	0	51.5	45 - 130				
Naphthalene	89.13	3.3	166.8	2.817	51.8	50 - 125				
Nitrobenzene	80.34	6.6	166.8	0	48.2	50 - 125				S
N-Nitrosodi-n-propylamine	89.74	6.6	166.8	0	53.8	45 - 120				
N-Nitrosodiphenylamine	122.2	6.6	166.8	0	73.2	50 - 130				
Pentachlorophenol	76.71	6.6	166.8	0	46.0	23 - 136				
Phenanthrene	165.3	3.3	166.8	61.02	62.5	50 - 125				
Phenol	83.96	6.6	166.8	0	50.3	45 - 130				
Pyrene	237.6	3.3	166.8	145.1	55.5	45 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 21:26**
Client ID: **COMP-SB66-170908** Run ID: **SV-6_301261** SeqNo: **4221744** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*105.4*	*0*	*166.8*	*0*	*63.2*	*36 - 126*				
Surr: 2-Fluorobiphenyl	*99.47*	*0*	*166.8*	*0*	*59.6*	*43 - 125*				
Surr: 2-Fluorophenol	*76.95*	*0*	*166.8*	*0*	*46.1*	*37 - 125*				
Surr: 4-Terphenyl-d14	*131.2*	*0*	*166.8*	*0*	*78.7*	*32 - 125*				
Surr: Nitrobenzene-d5	*87.76*	*0*	*166.8*	*0*	*52.6*	*37 - 125*				
Surr: Phenol-d6	*100.1*	*0*	*166.8*	*0*	*60.0*	*40 - 125*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 23:58**
Client ID: **COMP-SB66-170908** Run ID: **SV-6_301261** SeqNo: **4221746** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	97.81	6.6	166.7	0	58.7	50 - 120	89.57	8.8	30	
1,2,4,5-Tetrachlorobenzene	102.2	6.6	166.7	0	61.3	40 - 140	102	0.172	30	
1,4-Dioxane	40	6.6	166.7	0	24.0	40 - 140	39.9	0.246	30	S
1-Methylnaphthalene	98.03	3.3	166.7	0	58.8	50 - 120	83.52	16	30	
2,3,4,6-Tetrachlorophenol	123	6.6	166.7	0	73.8	40 - 140	122.2	0.648	30	
2,4,5-Trichlorophenol	123.2	6.6	166.7	0	73.9	45 - 127	106.2	14.9	30	
2,4,6-Trichlorophenol	92.54	6.6	166.7	0	55.5	45 - 130	84.06	9.6	30	
2,4-Dichlorophenol	105.5	6.6	166.7	0	63.3	45 - 125	76.86	31.4	30	R
2,4-Dimethylphenol	112	6.6	166.7	0	67.2	45 - 120	82.5	30.3	30	R
2,4-Dinitrophenol	12.09	13	166.7	0	7.25	10 - 126	23.24	0	30	JS
2,4-Dinitrotoluene	108.7	6.6	166.7	0	65.2	50 - 130	110.5	1.63	30	
2,6-Dinitrotoluene	115.6	6.6	166.7	0	69.4	50 - 125	99.82	14.7	30	
2-Chloronaphthalene	105.6	6.6	166.7	0	63.4	50 - 145	96.78	8.73	30	
2-Chlorophenol	89.8	6.6	166.7	0	53.9	45 - 120	65.16	31.8	30	R
2-Methylnaphthalene	103.8	3.3	166.7	2.84	60.6	50 - 120	91.6	12.5	30	
2-Methylphenol	98.35	6.6	166.7	0	59.0	45 - 120	95.53	2.91	30	
2-Nitroaniline	44	6.6	166.7	0	26.4	45 - 138	161.2	114	30	SR
2-Nitrophenol	57.89	6.6	166.7	0	34.7	45 - 125	78.73	30.5	30	SR
3&4-Methylphenol	92.57	6.6	166.7	0	55.5	45 - 120	93.32	0.81	30	
3,3´-Dichlorobenzidine	161.7	6.6	166.7	0	97.0	15 - 120	44.31	114	30	R
3-Nitroaniline	131.7	6.6	166.7	0	79.0	40 - 120	103.1	24.4	30	
4,6-Dinitro-2-methylphenol	4.92	6.6	166.7	0	2.95	15 - 135	47.71	0	30	JS
4-Bromophenyl phenyl ether	98.22	6.6	166.7	0	58.9	50 - 125	104.6	6.29	30	
4-Chloro-3-methylphenol	137.2	6.6	166.7	0	82.3	45 - 130	118.4	14.7	30	
4-Chlorophenyl phenyl ether	102.5	6.6	166.7	0	61.5	50 - 120	103.7	1.11	30	
4-Nitroaniline	170.3	6.6	166.7	0	102	50 - 127	108.6	44.3	30	R
4-Nitrophenol	93.1	13	166.7	0	55.9	40 - 147	96.81	3.9	30	
Acenaphthene	105.8	3.3	166.7	0	63.5	50 - 120	93.97	11.8	30	
Acenaphthylene	105.3	3.3	166.7	3.109	61.3	50 - 120	101.4	3.77	30	
Acetophenone	69.69	6.6	166.7	0	41.8	50 - 120	60.13	14.7	30	S
Anthracene	132.1	3.3	166.7	12.27	71.9	50 - 123	129.6	1.89	30	
Atrazine	104.1	6.6	166.7	0	62.5	29 - 148	96.41	7.69	30	
Benz(a)anthracene	190.2	3.3	166.7	78.43	67.1	50 - 131	187.1	1.64	30	
Benzaldehyde	9.546	6.6	166.7	0	5.73	22 - 129	11.91	22.1	30	S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: 119863 **Instrument: SV-6** **Method: SW8270**

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 23:58**
Client ID: **COMP-SB66-170908** Run ID: **SV-6_301261** SeqNo: **4221746** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	194	3.3	166.7	94.21	59.9	50 - 130	169.1	13.8	30	
Benzo(b)fluoranthene	209	3.3	166.7	126.2	49.7	50 - 137	186.2	11.5	30	S
Benzo(g,h,i)perylene	183.1	3.3	166.7	80	61.9	50 - 130	163.8	11.1	30	
Benzo(k)fluoranthene	155	3.3	166.7	52.43	61.6	50 - 143	145	6.67	30	
Bis(2-chloroethoxy)methane	82.54	6.6	166.7	0	49.5	50 - 120	85.49	3.51	30	S
Bis(2-chloroethyl)ether	80.13	6.6	166.7	0	48.1	45 - 127	70.37	13	30	
Bis(2-chloroisopropyl)ether	80.46	6.6	166.7	0	48.3	50 - 120	75.31	6.62	30	S
Bis(2-ethylhexyl)phthalate	194.9	6.6	166.7	60.25	80.8	21 - 148	192.1	1.42	30	
Butyl benzyl phthalate	157.5	6.6	166.7	17.2	84.2	50 - 136	138.7	12.7	30	
Caprolactam	105.5	6.6	166.7	0	63.3	50 - 135	123.3	15.6	30	
Carbazole	155.9	6.6	166.7	13.62	85.4	50 - 143	145.1	7.13	30	
Chrysene	201.6	3.3	166.7	96.75	62.9	50 - 130	212.3	5.2	30	
Dibenz(a,h)anthracene	149.7	3.3	166.7	0	89.8	50 - 130	135.1	10.3	30	
Dibenzofuran	104.4	3.3	166.7	0	62.6	50 - 125	96.96	7.35	30	
Diethyl phthalate	119.2	6.6	166.7	0	71.5	50 - 125	109.1	8.83	30	
Dimethyl phthalate	107.9	6.6	166.7	0	64.7	50 - 125	99.75	7.83	30	
Di-n-butyl phthalate	148.5	6.6	166.7	34.07	68.7	50 - 140	153.1	3.03	30	
Di-n-octyl phthalate	151.4	6.6	166.7	0	90.8	50 - 140	131.4	14.2	30	
Fluoranthene	237.5	3.3	166.7	155.9	49.0	50 - 131	245.3	3.23	30	S
Fluorene	114.7	3.3	166.7	3.215	66.9	50 - 125	112.3	2.14	30	
Hexachlorobenzene	114.5	6.6	166.7	0	68.7	50 - 124	132.3	14.4	30	
Hexachlorobutadiene	77.64	6.6	166.7	0	46.6	50 - 125	70.86	9.13	30	S
Hexachlorocyclopentadiene	7.856	6.6	166.7	0	4.71	45 - 135	15.12	63.2	30	SR
Hexachloroethane	52.01	6.6	166.7	0	31.2	45 - 125	59.76	13.9	30	S
Indeno(1,2,3-cd)pyrene	202.4	3.3	166.7	72.7	77.8	45 - 139	176.1	13.9	30	
Isophorone	83.76	6.6	166.7	0	50.3	45 - 130	85.88	2.49	30	
Naphthalene	94.1	3.3	166.7	2.817	54.8	50 - 125	89.13	5.42	30	
Nitrobenzene	93.89	6.6	166.7	0	56.3	50 - 125	80.34	15.6	30	
N-Nitrosodi-n-propylamine	95.87	6.6	166.7	0	57.5	45 - 120	89.74	6.6	30	
N-Nitrosodiphenylamine	122.3	6.6	166.7	0	73.4	50 - 130	122.2	0.0821	30	
Pentachlorophenol	66.45	6.6	166.7	0	39.9	23 - 136	76.71	14.3	30	
Phenanthrene	157.4	3.3	166.7	61.02	57.8	50 - 125	165.3	4.89	30	
Phenol	106.5	6.6	166.7	0	63.9	45 - 130	83.96	23.7	30	
Pyrene	244.8	3.3	166.7	145.1	59.8	45 - 130	237.6	2.96	30	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **119863** **Instrument:** **SV-6** **Method:** **SW8270**

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 23:58**
Client ID: **COMP-SB66-170908** Run ID: **SV-6_301261** SeqNo: **4221746** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*103.4*	*0*	*166.7*	*0*	*62.0*	*36 - 126*	*105.4*	*1.93*	*30*	
Surr: 2-Fluorobiphenyl	*97.94*	*0*	*166.7*	*0*	*58.8*	*43 - 125*	*99.47*	*1.54*	*30*	
Surr: 2-Fluorophenol	*78.95*	*0*	*166.7*	*0*	*47.4*	*37 - 125*	*76.95*	*2.57*	*30*	
Surr: 4-Terphenyl-d14	*135.8*	*0*	*166.7*	*0*	*81.5*	*32 - 125*	*131.2*	*3.46*	*30*	
Surr: Nitrobenzene-d5	*95.76*	*0*	*166.7*	*0*	*57.5*	*37 - 125*	*87.76*	*8.72*	*30*	
Surr: Phenol-d6	*103.6*	*0*	*166.7*	*0*	*62.2*	*40 - 125*	*100.1*	*3.46*	*30*	

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301207 **Instrument: VOA5** **Method: SW8260**

MBLK Sample ID: **VBLKS1-090817** Units: **ug/Kg** Analysis Date: **08-Sep-2017 11:12**
Client ID: Run ID: **VOA5_301207** SeqNo: **4220562** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	U	5.0								
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichlor-1,2,2-trifluoroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2,3-Trichlorobenzene	U	5.0								
1,2,4-Trichlorobenzene	U	5.0								
1,2,4-Trimethylbenzene	U	5.0								
1,2-Dibromoethane	U	5.0								
1,2-Dichlorobenzene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
1,3,5-Trimethylbenzene	U	5.0								
1,3-Dichlorobenzene	U	5.0								
1,4-Dichlorobenzene	U	5.0								
2-Butanone	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	20								
Benzene	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	10								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	10								
Chloroform	U	5.0								
Chloromethane	U	10								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Cyclohexane	U	5.0								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **R301207** **Instrument:** **VOA5** **Method:** **SW8260**

MBLK Sample ID: **VBLKS1-090817** Units: **ug/Kg** Analysis Date: **08-Sep-2017 11:12**
Client ID: Run ID: **VOA5_301207** SeqNo: **4220562** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	U	5.0								
Dichlorodifluoromethane	U	5.0								
Ethylbenzene	U	5.0								
Isopropylbenzene	U	5.0								
Methyl acetate	U	5.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	10								
n-Butylbenzene	U	5.0								
n-Propylbenzene	U	5.0								
sec-Butylbenzene	U	5.0								
Styrene	U	5.0								
tert-Butylbenzene	U	5.0								
Tetrachloroethene	U	5.0								
Toluene	U	5.0								
trans-1,2-Dichloroethene	U	5.0								
trans-1,3-Dichloropropene	U	5.0								
Trichloroethene	U	5.0								
Trichlorofluoromethane	U	5.0								
Vinyl chloride	U	2.0								
Xylenes, Total	U	5.0								
Surr: 1,2-Dichloroethane-d4	*45.53*	*0*	*50*	*0*	*91.1*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*50.38*	*0*	*50*	*0*	*101*	*83 - 120*				
Surr: Dibromofluoromethane	*49.93*	*0*	*50*	*0*	*99.9*	*80 - 119*				
Surr: Toluene-d8	*52.24*	*0*	*50*	*0*	*104*	*81 - 118*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301207 **Instrument: VOA5** **Method: SW8260**

LCS Sample ID: **VLCSS1-090817** Units: **ug/Kg** Analysis Date: **08-Sep-2017 10:26**
Client ID: Run ID: **VOA5_301207** SeqNo: **4220561** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	48.94	5.0	50	0	97.9	79 - 121				
1,1,1-Trichloroethane	54.37	5.0	50	0	109	72 - 130				
1,1,2,2-Tetrachloroethane	49.21	5.0	50	0	98.4	71 - 124				
1,1,2-Trichlor-1,2,2-trifluoroethane	56.46	5.0	50	0	113	70 - 130				
1,1,2-Trichloroethane	47.16	5.0	50	0	94.3	78 - 117				
1,1-Dichloroethane	61.45	5.0	50	0	123	76 - 128				
1,1-Dichloroethene	52.62	5.0	50	0	105	72 - 130				
1,2,3-Trichlorobenzene	51.93	5.0	50	0	104	76 - 125				
1,2,4-Trichlorobenzene	53.25	5.0	50	0	106	70 - 128				
1,2,4-Trimethylbenzene	53.59	5.0	50	0	107	74 - 126				
1,2-Dibromoethane	47.64	5.0	50	0	95.3	78 - 120				
1,2-Dichlorobenzene	53.6	5.0	50	0	107	79 - 121				
1,2-Dichloroethane	49.54	5.0	50	0	99.1	77 - 120				
1,2-Dichloropropane	51	5.0	50	0	102	77 - 121				
1,3,5-Trimethylbenzene	53.82	5.0	50	0	108	76 - 126				
1,3-Dichlorobenzene	53.81	5.0	50	0	108	78 - 121				
1,4-Dichlorobenzene	52.81	5.0	50	0	106	78 - 120				
2-Butanone	110.3	10	100	0	110	70 - 128				
2-Hexanone	89.17	10	100	0	89.2	72 - 127				
4-Methyl-2-pentanone	83.75	10	100	0	83.7	70 - 128				
Acetone	92.76	20	100	0	92.8	70 - 130				
Benzene	51.37	5.0	50	0	103	75 - 124				
Bromodichloromethane	55.59	5.0	50	0	111	78 - 122				
Bromoform	48.91	5.0	50	0	97.8	74 - 120				
Bromomethane	49.54	10	50	0	99.1	70 - 130				
Carbon disulfide	102.3	10	100	0	102	70 - 122				
Carbon tetrachloride	50.6	5.0	50	0	101	72 - 128				
Chlorobenzene	50.87	5.0	50	0	102	81 - 119				
Chloroethane	55.54	10	50	0	111	70 - 130				
Chloroform	52.33	5.0	50	0	105	73 - 127				
Chloromethane	45.08	10	50	0	90.2	70 - 130				
cis-1,2-Dichloroethene	61.06	5.0	50	0	122	77 - 125				
cis-1,3-Dichloropropene	52.87	5.0	50	0	106	78 - 122				
Cyclohexane	51.24	5.0	50	0	102	74 - 126				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301207 **Instrument: VOA5** **Method: SW8260**

LCS Sample ID: **VLCSS1-090817** Units: **ug/Kg** Analysis Date: **08-Sep-2017 10:26**
Client ID: Run ID: **VOA5_301207** SeqNo: **4220561** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	44.01	5.0	50	0	88.0	78 - 120				
Dichlorodifluoromethane	44.29	5.0	50	0	88.6	70 - 130				
Ethylbenzene	49.32	5.0	50	0	98.6	70 - 123				
Isopropylbenzene	54.58	5.0	50	0	109	78 - 127				
Methyl acetate	49.79	5.0	50	0	99.6	69 - 123				
Methyl tert-butyl ether	57.11	5.0	50	0	114	70 - 128				
Methylcyclohexane	51.54	5.0	50	0	103	77 - 127				
Methylene chloride	52.06	10	50	0	104	71 - 125				
n-Butylbenzene	56.76	5.0	50	0	114	73 - 129				
n-Propylbenzene	54.06	5.0	50	0	108	76 - 128				
sec-Butylbenzene	57.27	5.0	50	0	115	76 - 129				
Styrene	53.35	5.0	50	0	107	80 - 123				
tert-Butylbenzene	56.14	5.0	50	0	112	74 - 130				
Tetrachloroethene	45.69	5.0	50	0	91.4	70 - 130				
Toluene	44.21	5.0	50	0	88.4	76 - 122				
trans-1,2-Dichloroethene	60.15	5.0	50	0	120	75 - 128				
trans-1,3-Dichloropropene	52.61	5.0	50	0	105	75 - 123				
Trichloroethene	52.17	5.0	50	0	104	78 - 125				
Trichlorofluoromethane	56.69	5.0	50	0	113	70 - 130				
Vinyl chloride	47.88	2.0	50	0	95.8	70 - 130				
Xylenes, Total	150.4	5.0	150	0	100	77 - 128				
Surr: 1,2-Dichloroethane-d4	*51.75*	*0*	*50*	*0*	*104*	*76 - 125*				
Surr: 4-Bromofluorobenzene	*48.28*	*0*	*50*	*0*	*96.6*	*83 - 120*				
Surr: Dibromofluoromethane	*52.64*	*0*	*50*	*0*	*105*	*80 - 119*				
Surr: Toluene-d8	*43.86*	*0*	*50*	*0*	*87.7*	*81 - 118*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **R301207** **Instrument:** **VOA5** **Method:** **SW8260**

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 13:09**
Client ID: **COMP-SB66-170908** Run ID: **VOA5_301207** SeqNo: **4220977** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	49.68	4.8	48.5	0	102	70 - 130				
1,1,1-Trichloroethane	48.73	4.8	48.5	0	100	70 - 130				
1,1,2,2-Tetrachloroethane	50.27	4.8	48.5	0	104	70 - 130				
1,1,2-Trichlor-1,2,2-trifluoroethane	43.72	4.8	48.5	0	90.1	70 - 130				
1,1,2-Trichloroethane	49.38	4.8	48.5	0	102	70 - 130				
1,1-Dichloroethane	45.31	4.8	48.5	0	93.4	70 - 130				
1,1-Dichloroethene	45.35	4.8	48.5	0	93.5	70 - 130				
1,2,3-Trichlorobenzene	35.89	4.8	48.5	0	74.0	70 - 130				
1,2,4-Trichlorobenzene	37.91	4.8	48.5	0	78.2	70 - 130				
1,2,4-Trimethylbenzene	48.85	4.8	48.5	0	101	70 - 130				
1,2-Dibromoethane	49.88	4.8	48.5	0	103	70 - 120				
1,2-Dichlorobenzene	47.02	4.8	48.5	0	96.9	70 - 130				
1,2-Dichloroethane	49.34	4.8	48.5	0	102	70 - 130				
1,2-Dichloropropane	51.03	4.8	48.5	0	105	70 - 130				
1,3,5-Trimethylbenzene	49.67	4.8	48.5	0	102	70 - 130				
1,3-Dichlorobenzene	47.34	4.8	48.5	0	97.6	70 - 130				
1,4-Dichlorobenzene	47.78	4.8	48.5	0	98.5	70 - 130				
2-Butanone	78.48	9.7	97	0	80.9	70 - 130				
2-Hexanone	89.52	9.7	97	0	92.3	70 - 130				
4-Methyl-2-pentanone	100	9.7	97	0	103	70 - 128				
Acetone	87.1	19	97	0	89.8	70 - 130				
Benzene	53.02	4.8	48.5	0	109	70 - 130				
Bromodichloromethane	53.82	4.8	48.5	0	111	70 - 130				
Bromoform	40.32	4.8	48.5	0	83.1	70 - 130				
Bromomethane	42.35	9.7	48.5	0	87.3	70 - 130				
Carbon disulfide	72.43	9.7	97	0	74.7	70 - 130				
Carbon tetrachloride	45.03	4.8	48.5	0	92.9	70 - 130				
Chlorobenzene	50.64	4.8	48.5	0	104	70 - 130				
Chloroethane	50.72	9.7	48.5	0	105	70 - 130				
Chloroform	48.91	4.8	48.5	0	101	70 - 130				
Chloromethane	41.76	9.7	48.5	0	86.1	70 - 130				
cis-1,2-Dichloroethene	48.07	4.8	48.5	0	99.1	70 - 130				
cis-1,3-Dichloropropene	53.02	4.8	48.5	0	109	70 - 130				
Cyclohexane	44.76	4.8	48.5	0	92.3	74 - 126				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **R301207** **Instrument:** **VOA5** **Method:** **SW8260**

MS Sample ID: **HS17090397-01MS** Units: **ug/Kg** Analysis Date: **08-Sep-2017 13:09**
Client ID: **COMP-SB66-170908** Run ID: **VOA5_301207** SeqNo: **4220977** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	51.16	4.8	48.5	0	105	70 - 130				
Dichlorodifluoromethane	40.64	4.8	48.5	0	83.8	70 - 130				
Ethylbenzene	51.04	4.8	48.5	0	105	70 - 130				
Isopropylbenzene	47.65	4.8	48.5	0	98.2	70 - 130				
Methyl acetate	39.39	4.8	48.5	0	81.2	69 - 123				
Methyl tert-butyl ether	42.41	4.8	48.5	0	87.4	70 - 130				
Methylcyclohexane	44.4	4.8	48.5	0	91.5	77 - 127				
Methylene chloride	40.62	9.7	48.5	0	83.7	70 - 130				
n-Butylbenzene	44.66	4.8	48.5	0	92.1	70 - 130				
n-Propylbenzene	49.86	4.8	48.5	0	103	79 - 123				
sec-Butylbenzene	47.72	4.8	48.5	0	98.4	70 - 130				
Styrene	48.54	4.8	48.5	0	100	70 - 130				
tert-Butylbenzene	48.76	4.8	48.5	0	101	79 - 124				
Tetrachloroethene	51.58	4.8	48.5	0	106	70 - 130				
Toluene	49.5	4.8	48.5	0	102	70 - 130				
trans-1,2-Dichloroethene	44.25	4.8	48.5	0	91.2	70 - 130				
trans-1,3-Dichloropropene	56.13	4.8	48.5	0	116	70 - 130				
Trichloroethene	51.02	4.8	48.5	0	105	70 - 130				
Trichlorofluoromethane	54.22	4.8	48.5	0	112	70 - 130				
Vinyl chloride	44.79	1.9	48.5	0	92.3	70 - 130				
Xylenes, Total	148.6	4.8	145.5	0	102	70 - 130				
Surr: 1,2-Dichloroethane-d4	*51.31*	*0*	*48.5*	*0*	*106*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*42.34*	*0*	*48.5*	*0*	*87.3*	*72 - 120*				
Surr: Dibromofluoromethane	*47.43*	*0*	*48.5*	*0*	*97.8*	*70 - 130*				
Surr: Toluene-d8	*45.08*	*0*	*48.5*	*0*	*93.0*	*82 - 121*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301207 **Instrument:** VOA5 **Method:** SW8260

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 13:32**
Client ID: **COMP-SB66-170908** Run ID: **VOA5_301207** SeqNo: **4220978** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	44.09	4.9	49	0	90.0	70 - 130	49.68	11.9	30	
1,1,1-Trichloroethane	45.88	4.9	49	0	93.6	70 - 130	48.73	6.03	30	
1,1,2,2-Tetrachloroethane	40.51	4.9	49	0	82.7	70 - 130	50.27	21.5	30	
1,1,2-Trichlor-1,2,2-trifluoroethane	41.51	4.9	49	0	84.7	70 - 130	43.72	5.18	30	
1,1,2-Trichloroethane	53.44	4.9	49	0	109	70 - 130	49.38	7.9	30	
1,1-Dichloroethane	43.06	4.9	49	0	87.9	70 - 130	45.31	5.08	30	
1,1-Dichloroethene	46.34	4.9	49	0	94.6	70 - 130	45.35	2.15	30	
1,2,3-Trichlorobenzene	23.62	4.9	49	0	48.2	70 - 130	35.89	41.2	30	SR
1,2,4-Trichlorobenzene	26.2	4.9	49	0	53.5	70 - 130	37.91	36.5	30	SR
1,2,4-Trimethylbenzene	38.34	4.9	49	0	78.3	70 - 130	48.85	24.1	30	
1,2-Dibromoethane	47.68	4.9	49	0	97.3	70 - 120	49.88	4.52	30	
1,2-Dichlorobenzene	37.09	4.9	49	0	75.7	70 - 130	47.02	23.6	30	
1,2-Dichloroethane	40.2	4.9	49	0	82.0	70 - 130	49.34	20.4	30	
1,2-Dichloropropane	47.73	4.9	49	0	97.4	70 - 130	51.03	6.68	30	
1,3,5-Trimethylbenzene	38.37	4.9	49	0	78.3	70 - 130	49.67	25.7	30	
1,3-Dichlorobenzene	37.1	4.9	49	0	75.7	70 - 130	47.34	24.3	30	
1,4-Dichlorobenzene	36.71	4.9	49	0	74.9	70 - 130	47.78	26.2	30	
2-Butanone	67.39	9.8	98	0	68.8	70 - 130	78.48	15.2	30	S
2-Hexanone	80.42	9.8	98	0	82.1	70 - 130	89.52	10.7	30	
4-Methyl-2-pentanone	161.1	9.8	98	0	164	70 - 128	100	46.8	30	SR
Acetone	153.2	20	98	0	156	70 - 130	87.1	55	30	SR
Benzene	43.37	4.9	49	0	88.5	70 - 130	53.02	20	30	
Bromodichloromethane	57.68	4.9	49	0	118	70 - 130	53.82	6.92	30	
Bromoform	36.78	4.9	49	0	75.1	70 - 130	40.32	9.17	30	
Bromomethane	45.23	9.8	49	0	92.3	70 - 130	42.35	6.58	30	
Carbon disulfide	66.58	9.8	98	0	67.9	70 - 130	72.43	8.41	30	S
Carbon tetrachloride	38.49	4.9	49	0	78.6	70 - 130	45.03	15.7	30	
Chlorobenzene	43.01	4.9	49	0	87.8	70 - 130	50.64	16.3	30	
Chloroethane	48.47	9.8	49	0	98.9	70 - 130	50.72	4.53	30	
Chloroform	45.26	4.9	49	0	92.4	70 - 130	48.91	7.75	30	
Chloromethane	41.28	9.8	49	0	84.3	70 - 130	41.76	1.14	30	
cis-1,2-Dichloroethene	45.89	4.9	49	0	93.7	70 - 130	48.07	4.63	30	
cis-1,3-Dichloropropene	51.59	4.9	49	0	105	70 - 130	53.02	2.74	30	
Cyclohexane	37.14	4.9	49	0	75.8	74 - 126	44.76	18.6	30	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **R301207** **Instrument:** **VOA5** **Method:** **SW8260**

MSD Sample ID: **HS17090397-01MSD** Units: **ug/Kg** Analysis Date: **08-Sep-2017 13:32**
Client ID: **COMP-SB66-170908** Run ID: **VOA5_301207** SeqNo: **4220978** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	51.26	4.9	49	0	105	70 - 130	51.16	0.212	30	
Dichlorodifluoromethane	37.84	4.9	49	0	77.2	70 - 130	40.64	7.12	30	
Ethylbenzene	41.09	4.9	49	0	83.9	70 - 130	51.04	21.6	30	
Isopropylbenzene	39.47	4.9	49	0	80.6	70 - 130	47.65	18.8	30	
Methyl acetate	32.15	4.9	49	0	65.6	69 - 123	39.39	20.2	30	S
Methyl tert-butyl ether	41.36	4.9	49	0	84.4	70 - 130	42.41	2.51	30	
Methylcyclohexane	34.41	4.9	49	0	70.2	77 - 127	44.4	25.4	30	S
Methylene chloride	40.18	9.8	49	0	82.0	70 - 130	40.62	1.09	30	
n-Butylbenzene	31.77	4.9	49	0	64.8	70 - 130	44.66	33.7	30	SR
n-Propylbenzene	37.68	4.9	49	0	76.9	79 - 123	49.86	27.8	30	S
sec-Butylbenzene	35.01	4.9	49	0	71.4	70 - 130	47.72	30.7	30	R
Styrene	39.72	4.9	49	0	81.1	70 - 130	48.54	20	30	
tert-Butylbenzene	37.63	4.9	49	0	76.8	79 - 124	48.76	25.8	30	S
Tetrachloroethene	50.59	4.9	49	0	103	70 - 130	51.58	1.93	30	
Toluene	58.38	4.9	49	0	119	70 - 130	49.5	16.5	30	
trans-1,2-Dichloroethene	42.43	4.9	49	0	86.6	70 - 130	44.25	4.21	30	
trans-1,3-Dichloropropene	49.33	4.9	49	0	101	70 - 130	56.13	12.9	30	
Trichloroethene	45.54	4.9	49	0	92.9	70 - 130	51.02	11.3	30	
Trichlorofluoromethane	50.55	4.9	49	0	103	70 - 130	54.22	7.02	30	
Vinyl chloride	43.37	2.0	49	0	88.5	70 - 130	44.79	3.2	30	
Xylenes, Total	121.3	4.9	147	0	82.5	70 - 130	148.6	20.2	30	
Surr: 1,2-Dichloroethane-d4	*47.75*	*0*	*49*	*0*	*97.5*	*70 - 126*	*51.31*	*7.19*	*30*	
Surr: 4-Bromofluorobenzene	*49.16*	*0*	*49*	*0*	*100*	*72 - 120*	*42.34*	*14.9*	*30*	
Surr: Dibromofluoromethane	*51.46*	*0*	*49*	*0*	*105*	*70 - 130*	*47.43*	*8.15*	*30*	
Surr: Toluene-d8	*65.54*	*0*	*49*	*0*	*134*	*82 - 121*	*45.08*	*37*	*30*	SR

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

MBLK Sample ID: **VBLKW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:55**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221697** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	U	1.0								
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichlor-1,2,2-trifluoroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,3-Trichlorobenzene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2,4-Trimethylbenzene	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	1.0								
1,3,5-Trimethylbenzene	U	1.0								
1,3-Dichlorobenzene	U	1.0								
1,4-Dichlorobenzene	U	1.0								
2-Butanone	U	2.0								
2-Hexanone	U	2.0								
4-Methyl-2-pentanone	U	2.0								
Acetone	U	2.0								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.0								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	1.0								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MBLK Sample ID: **VBLKW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:55**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221697** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	1.0								
Methyl tert-butyl ether	U	1.0								
Methylcyclohexane	U	1.0								
Methylene chloride	U	2.0								
n-Butylbenzene	U	1.0								
n-Propylbenzene	U	1.0								
sec-Butylbenzene	U	1.0								
Styrene	U	1.0								
tert-Butylbenzene	U	1.0								
Tetrachloroethene	U	1.0								
Toluene	U	1.0								
trans-1,2-Dichloroethene	U	1.0								
trans-1,3-Dichloropropene	U	1.0								
Trichloroethene	U	1.0								
Trichlorofluoromethane	U	1.0								
Vinyl chloride	U	1.0								
Xylenes, Total	U	1.0								
Surr: 1,2-Dichloroethane-d4	*49.67*	*1.0*	*50*	*0*	*99.3*	*70 - 123*				
Surr: 4-Bromofluorobenzene	*48.85*	*1.0*	*50*	*0*	*97.7*	*82 - 115*				
Surr: Dibromofluoromethane	*52.87*	*1.0*	*50*	*0*	*106*	*73 - 126*				
Surr: Toluene-d8	*51.12*	*1.0*	*50*	*0*	*102*	*81 - 120*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:06**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221695** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	45.58	1.0	50	0	91.2	77 - 118				
1,1,1-Trichloroethane	50.12	1.0	50	0	100	70 - 130				
1,1,2,2-Tetrachloroethane	44.05	1.0	50	0	88.1	70 - 120				
1,1,2-Trichlor-1,2,2-trifluoroethane	53.49	1.0	50	0	107	70 - 130				
1,1,2-Trichloroethane	46.19	1.0	50	0	92.4	77 - 113				
1,1-Dichloroethane	49.23	1.0	50	0	98.5	71 - 122				
1,1-Dichloroethene	50.3	1.0	50	0	101	70 - 130				
1,2,3-Trichlorobenzene	48.46	1.0	50	0	96.9	70 - 130				
1,2,4-Trichlorobenzene	50.77	1.0	50	0	102	77 - 126				
1,2,4-Trimethylbenzene	52.1	1.0	50	0	104	73 - 121				
1,2-Dibromoethane	46.91	1.0	50	0	93.8	76 - 123				
1,2-Dichlorobenzene	56.38	1.0	50	0	113	77 - 113				
1,2-Dichloroethane	45.59	1.0	50	0	91.2	70 - 124				
1,2-Dichloropropane	54.73	1.0	50	0	109	72 - 119				
1,3,5-Trimethylbenzene	51.78	1.0	50	0	104	75 - 118				
1,3-Dichlorobenzene	55.87	1.0	50	0	112	78 - 118				
1,4-Dichlorobenzene	54.81	1.0	50	0	110	79 - 113				
2-Butanone	99.84	2.0	100	0	99.8	70 - 130				
2-Hexanone	86.38	2.0	100	0	86.4	70 - 130				
4-Methyl-2-pentanone	87.77	2.0	100	0	87.8	70 - 130				
Acetone	98.54	2.0	100	0	98.5	70 - 130				
Benzene	48.37	1.0	50	0	96.7	74 - 120				
Bromodichloromethane	48.68	1.0	50	0	97.4	74 - 122				
Bromoform	43.63	1.0	50	0	87.3	73 - 128				
Bromomethane	42.62	1.0	50	0	85.2	70 - 130				
Carbon disulfide	116.3	2.0	100	0	116	70 - 130				
Carbon tetrachloride	52.53	1.0	50	0	105	71 - 125				
Chlorobenzene	45.98	1.0	50	0	92.0	76 - 113				
Chloroethane	50.58	1.0	50	0	101	70 - 130				
Chloroform	48.14	1.0	50	0	96.3	71 - 121				
Chloromethane	54.2	1.0	50	0	108	70 - 129				
cis-1,2-Dichloroethene	47.58	1.0	50	0	95.2	75 - 122				
cis-1,3-Dichloropropene	49.11	1.0	50	0	98.2	73 - 127				
Cyclohexane	50.83	1.0	50	0	102	70 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:06**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221695** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	45.54	1.0	50	0	91.1	77 - 122				
Dichlorodifluoromethane	59.24	1.0	50	0	118	70 - 130				
Ethylbenzene	46.53	1.0	50	0	93.1	77 - 117				
Isopropylbenzene	48.44	1.0	50	0	96.9	73 - 127				
Methyl acetate	48.8	1.0	50	0	97.6	76 - 122				
Methyl tert-butyl ether	45.95	1.0	50	0	91.9	70 - 130				
Methylcyclohexane	49.7	1.0	50	0	99.4	61 - 157				
Methylene chloride	55.32	2.0	50	0	111	70 - 127				
n-Butylbenzene	58.11	1.0	50	0	116	72 - 130				
n-Propylbenzene	51.45	1.0	50	0	103	73 - 124				
sec-Butylbenzene	58.61	1.0	50	0	117	73 - 128				
Styrene	45.82	1.0	50	0	91.6	72 - 126				
tert-Butylbenzene	57.53	1.0	50	0	115	73 - 124				
Tetrachloroethene	52.27	1.0	50	0	105	76 - 119				
Toluene	47.63	1.0	50	0	95.3	77 - 118				
trans-1,2-Dichloroethene	48.94	1.0	50	0	97.9	72 - 127				
trans-1,3-Dichloropropene	49.21	1.0	50	0	98.4	77 - 119				
Trichloroethene	47.07	1.0	50	0	94.1	77 - 121				
Trichlorofluoromethane	49.87	1.0	50	0	99.7	70 - 130				
Vinyl chloride	51.71	1.0	50	0	103	70 - 130				
Xylenes, Total	137.3	1.0	150	0	91.5	75 - 122				
Surr: 1,2-Dichloroethane-d4	*50.02*	*1.0*	*50*	*0*	*100*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*50*	*1.0*	*50*	*0*	*100*	*82 - 115*				
Surr: Dibromofluoromethane	*49.47*	*1.0*	*50*	*0*	*98.9*	*73 - 126*				
Surr: Toluene-d8	*49.32*	*1.0*	*50*	*0*	*98.6*	*81 - 120*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS17090398-01MS** Units: **ug/L** Analysis Date: **08-Sep-2017 18:08**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221726** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	44.22	1.0	50	0	88.4	70 - 120				
1,1,1-Trichloroethane	50.16	1.0	50	0	100	70 - 130				
1,1,2,2-Tetrachloroethane	40.73	1.0	50	0	81.5	70 - 123				
1,1,2-Trichlor-1,2,2-trifluoroethane	50.6	1.0	50	0	101	70 - 130				
1,1,2-Trichloroethane	43.22	1.0	50	0	86.4	70 - 117				
1,1-Dichloroethane	47.83	1.0	50	0	95.7	70 - 127				
1,1-Dichloroethene	49.62	1.0	50	0	99.2	70 - 130				
1,2,3-Trichlorobenzene	44.93	1.0	50	0	89.9	70 - 130				
1,2,4-Trichlorobenzene	48.07	1.0	50	0	96.1	70 - 125				
1,2,4-Trimethylbenzene	49.89	1.0	50	0	99.8	70 - 125				
1,2-Dibromoethane	43.45	1.0	50	0	86.9	70 - 124				
1,2-Dichlorobenzene	52.63	1.0	50	0	105	70 - 115				
1,2-Dichloroethane	43.88	1.0	50	0	87.8	70 - 127				
1,2-Dichloropropane	52.44	1.0	50	0	105	70 - 122				
1,3,5-Trimethylbenzene	49.97	1.0	50	0	99.9	70 - 126				
1,3-Dichlorobenzene	54.21	1.0	50	0	108	70 - 119				
1,4-Dichlorobenzene	51.73	1.0	50	0	103	70 - 114				
2-Butanone	89.57	2.0	100	0	89.6	70 - 130				
2-Hexanone	80.58	2.0	100	0	80.6	70 - 130				
4-Methyl-2-pentanone	83.42	2.0	100	0	83.4	70 - 130				
Acetone	114.5	2.0	100	17.86	96.7	70 - 130				
Benzene	47.37	1.0	50	0	94.7	70 - 127				
Bromodichloromethane	45.51	1.0	50	0	91.0	70 - 124				
Bromoform	40.14	1.0	50	0	80.3	70 - 129				
Bromomethane	47.36	1.0	50	0	94.7	70 - 130				
Carbon disulfide	115.7	2.0	100	0	116	70 - 130				
Carbon tetrachloride	53.6	1.0	50	0	107	70 - 130				
Chlorobenzene	44.44	1.0	50	0	88.9	70 - 114				
Chloroethane	49.16	1.0	50	0	98.3	70 - 130				
Chloroform	47.46	1.0	50	0	94.9	70 - 125				
Chloromethane	46.45	1.0	50	0	92.9	70 - 130				
cis-1,2-Dichloroethene	47.26	1.0	50	0	94.5	70 - 128				
cis-1,3-Dichloropropene	46.29	1.0	50	0	92.6	70 - 125				
Cyclohexane	52.61	1.0	50	0	105	70 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

MS Sample ID: **HS17090398-01MS** Units: **ug/L** Analysis Date: **08-Sep-2017 18:08**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221726** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	42.57	1.0	50	0	85.1	70 - 124				
Dichlorodifluoromethane	33.46	1.0	50	0	66.9	70 - 130				S
Ethylbenzene	45.58	1.0	50	0	91.2	70 - 124				
Isopropylbenzene	47.68	1.0	50	0	95.4	70 - 130				
Methyl acetate	45.02	1.0	50	0	90.0	76 - 122				
Methyl tert-butyl ether	42.65	1.0	50	0	85.3	70 - 130				
Methylcyclohexane	51.63	1.0	50	0	103	61 - 158				
Methylene chloride	52.43	2.0	50	0	105	70 - 128				
n-Butylbenzene	57.7	1.0	50	0	115	70 - 130				
n-Propylbenzene	50.97	1.0	50	0	102	70 - 130				
sec-Butylbenzene	58.96	1.0	50	0	118	70 - 130				
Styrene	44.3	1.0	50	0	88.6	70 - 130				
tert-Butylbenzene	57.53	1.0	50	0	115	70 - 130				
Tetrachloroethene	52.27	1.0	50	0	105	70 - 130				
Toluene	46.87	1.0	50	0	93.7	70 - 123				
trans-1,2-Dichloroethene	49.29	1.0	50	0	98.6	70 - 130				
trans-1,3-Dichloropropene	45.96	1.0	50	0	91.9	70 - 121				
Trichloroethene	47.15	1.0	50	0	94.3	70 - 129				
Trichlorofluoromethane	49.69	1.0	50	0	99.4	70 - 130				
Vinyl chloride	49.12	1.0	50	0	98.2	70 - 130				
Xylenes, Total	135.6	1.0	150	0	90.4	70 - 130				
Surr: 1,2-Dichloroethane-d4	*51.55*	*1.0*	*50*	*0*	*103*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.4*	*1.0*	*50*	*0*	*98.8*	*81 - 113*				
Surr: Dibromofluoromethane	*49.45*	*1.0*	*50*	*0*	*98.9*	*77 - 123*				
Surr: Toluene-d8	*49.67*	*1.0*	*50*	*0*	*99.3*	*82 - 127*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS17090398-01MSD** Units: **ug/L** Analysis Date: **08-Sep-2017 18:32**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221728** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	43.44	1.0	50	0	86.9	70 - 120	44.22	1.79	20	
1,1,1-Trichloroethane	49.43	1.0	50	0	98.9	70 - 130	50.16	1.48	20	
1,1,2,2-Tetrachloroethane	41.63	1.0	50	0	83.3	70 - 123	40.73	2.19	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	49.81	1.0	50	0	99.6	70 - 130	50.6	1.58	20	
1,1,2-Trichloroethane	42.42	1.0	50	0	84.8	70 - 117	43.22	1.86	20	
1,1-Dichloroethane	47.4	1.0	50	0	94.8	70 - 127	47.83	0.901	20	
1,1-Dichloroethene	47.89	1.0	50	0	95.8	70 - 130	49.62	3.55	20	
1,2,3-Trichlorobenzene	46.71	1.0	50	0	93.4	70 - 130	44.93	3.88	20	
1,2,4-Trichlorobenzene	49.06	1.0	50	0	98.1	70 - 125	48.07	2.05	20	
1,2,4-Trimethylbenzene	50.37	1.0	50	0	101	70 - 125	49.89	0.954	20	
1,2-Dibromoethane	42.83	1.0	50	0	85.7	70 - 124	43.45	1.44	20	
1,2-Dichlorobenzene	53.4	1.0	50	0	107	70 - 115	52.63	1.47	20	
1,2-Dichloroethane	42.81	1.0	50	0	85.6	70 - 127	43.88	2.46	20	
1,2-Dichloropropane	50.76	1.0	50	0	102	70 - 122	52.44	3.26	20	
1,3,5-Trimethylbenzene	50.1	1.0	50	0	100	70 - 126	49.97	0.26	20	
1,3-Dichlorobenzene	53.5	1.0	50	0	107	70 - 119	54.21	1.31	20	
1,4-Dichlorobenzene	51.42	1.0	50	0	103	70 - 114	51.73	0.589	20	
2-Butanone	87.28	2.0	100	0	87.3	70 - 130	89.57	2.59	20	
2-Hexanone	79.89	2.0	100	0	79.9	70 - 130	80.58	0.854	20	
4-Methyl-2-pentanone	77.24	2.0	100	0	77.2	70 - 130	83.42	7.69	20	
Acetone	117.3	2.0	100	17.86	99.4	70 - 130	114.5	2.34	20	
Benzene	45.95	1.0	50	0	91.9	70 - 127	47.37	3.04	20	
Bromodichloromethane	44.36	1.0	50	0	88.7	70 - 124	45.51	2.56	20	
Bromoform	40.44	1.0	50	0	80.9	70 - 129	40.14	0.732	20	
Bromomethane	45.69	1.0	50	0	91.4	70 - 130	47.36	3.59	20	
Carbon disulfide	115.5	2.0	100	0	116	70 - 130	115.7	0.122	20	
Carbon tetrachloride	52.2	1.0	50	0	104	70 - 130	53.6	2.65	20	
Chlorobenzene	43.48	1.0	50	0	87.0	70 - 114	44.44	2.2	20	
Chloroethane	47.38	1.0	50	0	94.8	70 - 130	49.16	3.71	20	
Chloroform	46.6	1.0	50	0	93.2	70 - 125	47.46	1.82	20	
Chloromethane	45.64	1.0	50	0	91.3	70 - 130	46.45	1.74	20	
cis-1,2-Dichloroethene	46.18	1.0	50	0	92.4	70 - 128	47.26	2.31	20	
cis-1,3-Dichloropropene	43.69	1.0	50	0	87.4	70 - 125	46.29	5.78	20	
Cyclohexane	50.83	1.0	50	0	102	70 - 130	52.61	3.43	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

MSD Sample ID: **HS17090398-01MSD** Units: **ug/L** Analysis Date: **08-Sep-2017 18:32**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221728** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	41.85	1.0	50	0	83.7	70 - 124	42.57	1.7	20	
Dichlorodifluoromethane	33.82	1.0	50	0	67.6	70 - 130	33.46	1.06	20	S
Ethylbenzene	44.66	1.0	50	0	89.3	70 - 124	45.58	2.03	20	
Isopropylbenzene	48.24	1.0	50	0	96.5	70 - 130	47.68	1.17	20	
Methyl acetate	44.95	1.0	50	0	89.9	76 - 122	45.02	0.158	20	
Methyl tert-butyl ether	42.53	1.0	50	0	85.1	70 - 130	42.65	0.293	20	
Methylcyclohexane	49.71	1.0	50	0	99.4	61 - 158	51.63	3.78	20	
Methylene chloride	51.64	2.0	50	0	103	70 - 128	52.43	1.52	20	
n-Butylbenzene	59.65	1.0	50	0	119	70 - 130	57.7	3.33	20	
n-Propylbenzene	50.48	1.0	50	0	101	70 - 130	50.97	0.949	20	
sec-Butylbenzene	58.98	1.0	50	0	118	70 - 130	58.96	0.0298	20	
Styrene	43.75	1.0	50	0	87.5	70 - 130	44.3	1.26	20	
tert-Butylbenzene	56.94	1.0	50	0	114	70 - 130	57.53	1.04	20	
Tetrachloroethene	51.07	1.0	50	0	102	70 - 130	52.27	2.31	20	
Toluene	44.42	1.0	50	0	88.8	70 - 123	46.87	5.38	20	
trans-1,2-Dichloroethene	46.66	1.0	50	0	93.3	70 - 130	49.29	5.48	20	
trans-1,3-Dichloropropene	43.53	1.0	50	0	87.1	70 - 121	45.96	5.43	20	
Trichloroethene	45.21	1.0	50	0	90.4	70 - 129	47.15	4.19	20	
Trichlorofluoromethane	49.07	1.0	50	0	98.1	70 - 130	49.69	1.26	20	
Vinyl chloride	46.91	1.0	50	0	93.8	70 - 130	49.12	4.6	20	
Xylenes, Total	132.2	1.0	150	0	88.1	70 - 130	135.6	2.59	20	
Surr: 1,2-Dichloroethane-d4	*51.52*	*1.0*	*50*	*0*	*103*	*70 - 126*	*51.55*	*0.0453*	*20*	
Surr: 4-Bromofluorobenzene	*51*	*1.0*	*50*	*0*	*102*	*81 - 113*	*49.4*	*3.19*	*20*	
Surr: Dibromofluoromethane	*49.94*	*1.0*	*50*	*0*	*99.9*	*77 - 123*	*49.45*	*0.984*	*20*	
Surr: Toluene-d8	*48.1*	*1.0*	*50*	*0*	*96.2*	*82 - 127*	*49.67*	*3.2*	*20*	

The following samples were analyzed in this batch: HS17090397-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: HS17090397

QC BATCH REPORT

Batch ID: **R301256** **Instrument:** **Balance1** **Method:** **ASTM D2216**

DUP Sample ID: **HS17090397-01DUP** Units: **wt%** Analysis Date: **08-Sep-2017 13:29**
Client ID: **COMP-SB66-170908** Run ID: **Balance1_301256** SeqNo: **4221671** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Percent Moisture	23.3	0.0100					24.1	3.38	20	

The following samples were analyzed in this batch: HS17090397-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey Soil 5040
WorkOrder: **HS17090397**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/Kg-dry	Milligrams per Kilogram- Dry weight corrected
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2017-2017	30-Apr-2018
Texas	T104704231-17-19	30-Apr-2018

ALS Group USA, Corp Date: 10-Sep-17

Sample Receipt Checklist

Client Name:	PBW - Houston	Date/Time Received:	**08-Sep-2017 11:26**
Work Order:	HS17090397	Received by:	**CL**

Checklist completed by:	*Cesar A. Lira* eSignature	8-Sep-2017 Date	Reviewed by: *Dane J. Wacasey* eSignature	8-Sep-2017 Date

Matrices: **Water, soil** Carrier name: **Client**

	Yes	No	Not Present	N/A
Shipping container/cooler in good condition?	☑	☐	☐	
Custody seals intact on shipping container/cooler?	☐	☐	☑	
Custody seals intact on sample bottles?	☐	☐	☑	
Chain of custody present?	☑	☐		
Chain of custody signed when relinquished and received?	☑	☐		
Chain of custody agrees with sample labels?	☑	☐		
Samples in proper container/bottle?	☑	☐		
Sample containers intact?	☑	☐		
TX1005 solids received in hermetically sealed vials?	☑	☐		☐
Sufficient sample volume for indicated test?	☑	☐		
All samples received within holding time?	☑	☐		
Container/Temp Blank temperature in compliance?	☑	☐		

Temperature(s)/Thermometer(s):	0.6c/1.1c uc/c	IR20
Cooler(s)/Kit(s):	43305	
Date/Time sample(s) sent to storage:	9/8/2017 1200	

	Yes	No	No VOA vials submitted	N/A
Water - VOA vials have zero headspace?	☑	☐	☐	
Water - pH acceptable upon receipt?	☑	☐		☐
pH adjusted?	☐	☐		☑

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

Chain of Custody For

Page 1 of 1

COC ID: 157059

HS17090397

Pastor, Behling & Wheeler, LLC
USOR Remedial Investigation 3333-6A

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	~~USOR RI/FS Iteration~~ 5040	Project Name	USOR 3333-6A
Work Order		Project Number	~~3333-6A~~ 5040
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	US Oil Recovery Site PRP Group
Send Report To	Brenda Basile	Invoice Attn	Joe Biss
Address	11231 Richmond Avenue Suite D104	Address	c/o EHS Support LLC PO Box 42
City/State/Zip	Houston, TX 77032	City/State/Zip	Beaver, PA 15009-0042
Phone	(832) 916-3691	Phone	
Fax		Fax	
e-Mail Address		e-Mail Address	

A	8260_S (8260 Volatiles *5035*)
B	TX1005_S_REV3 (TX1005 TPH *5035*)
C	8270_LOW_S (8270 Semivolatiles)
D	8081_S (8081 Pesticides)
E	8151_S (8151 Herbicides)
F	ICP_S_Low (6020/7471 Total Metals)
G	MOIST_ASTM (D2216-90 Moisture%)
H	8260_LL_W (8260 Volatiles - TRIP BLANK)
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	COMP-SB66-170908	9/8/17	0820	SO	None	8	X	X	X	X	X	X	X				
2	TB01-170908	9/18/17	1015	WQ	1	2								X			
3																	
4																	
5																	
6																	
7																	
8																	
9																	
0																	

Sampler(s) Please Print & Sign: Roberta Russell

Shipment Method: hand deliver

Required Turnaround Time: (Check Box) TAT 2 days Other

Results Due Date:

Relinquished by: Date: 9/8/17 Time: 1126

Received by:

Relinquished by: Date: Time:

Received by (Laboratory): 9-8-17 1126

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: [PBW USOR]

Cooler ID	Cooler Temp.
93305	0.6
12-20	
CSC+0.5	

QC Package: (Check One Box Below)
QC Level TRRP LPC
Other:

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
Work Order: HS17090398

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS17090398-01	MWGW05-170908	Groundwater		08-Sep-2017 09:20	08-Sep-2017 11:26	☐

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC

ANALYTICAL REPORT

Project: USOR Post Harvey GW 5040 WorkOrder:HS17090398

Sample ID: MWGW05-170908 Lab ID:HS17090398-01

Collection Date: 08-Sep-2017 09:20 Matrix:Groundwater

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**					Analyst: AKP
1,1,1,2-Tetrachloroethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
1,1,1-Trichloroethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
1,1,2,2-Tetrachloroethane	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:43
1,1,2-Trichlor-1,2,2-trifluoroethane	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:43
1,1,2-Trichloroethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
1,1-Dichloroethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
1,1-Dichloroethene	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
1,2,3-Trichlorobenzene	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:43
1,2,4-Trichlorobenzene	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:43
1,2,4-Trimethylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
1,2-Dibromoethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
1,2-Dichlorobenzene	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:43
1,2-Dichloroethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
1,2-Dichloropropane	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:43
1,3,5-Trimethylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
1,3-Dichlorobenzene	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:43
1,4-Dichlorobenzene	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:43
2-Butanone	U		0.00050	0.0020	mg/L	1	08-Sep-2017 17:43
2-Hexanone	U		0.0010	0.0020	mg/L	1	08-Sep-2017 17:43
4-Methyl-2-pentanone	U		0.00070	0.0020	mg/L	1	08-Sep-2017 17:43
Acetone	**0.018**		**0.0020**	**0.0020**	**mg/L**	1	08-Sep-2017 17:43
Benzene	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Bromodichloromethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Bromoform	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:43
Bromomethane	U		0.00040	0.0010	mg/L	1	08-Sep-2017 17:43
Carbon disulfide	U		0.00060	0.0020	mg/L	1	08-Sep-2017 17:43
Carbon tetrachloride	U		0.00050	0.0010	mg/L	1	08-Sep-2017 17:43
Chlorobenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Chloroethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Chloroform	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Chloromethane	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
cis-1,2-Dichloroethene	U		0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
cis-1,3-Dichloropropene	U		0.00010	0.0010	mg/L	1	08-Sep-2017 17:43
Cyclohexane	U	n	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Dibromochloromethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Dichlorodifluoromethane	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Ethylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Isopropylbenzene	U		0.00030	0.0010	mg/L	1	08-Sep-2017 17:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey GW 5040	WorkOrder:HS17090398	
Sample ID:	MWGW05-170908	Lab ID:HS17090398-01	
Collection Date:	08-Sep-2017 09:20	Matrix:Groundwater	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**					Analyst: AKP
Methyl acetate		U	0.0010	0.0010	mg/L	1	08-Sep-2017 17:43
Methyl tert-butyl ether		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Methylcyclohexane		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Methylene chloride		U	0.0010	0.0020	mg/L	1	08-Sep-2017 17:43
n-Butylbenzene		U	0.00040	0.0010	mg/L	1	08-Sep-2017 17:43
n-Propylbenzene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
sec-Butylbenzene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Styrene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
tert-Butylbenzene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Tetrachloroethene		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Toluene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
trans-1,2-Dichloroethene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
trans-1,3-Dichloropropene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Trichloroethene		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Trichlorofluoromethane		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Vinyl chloride		U	0.00020	0.0010	mg/L	1	08-Sep-2017 17:43
Xylenes, Total		U	0.00030	0.0010	mg/L	1	08-Sep-2017 17:43
Surr: 1,2-Dichloroethane-d4	*99.4*			*70-126*	*%REC*	*1*	*08-Sep-2017 17:43*
Surr: 4-Bromofluorobenzene	*98.1*			*81-113*	*%REC*	*1*	*08-Sep-2017 17:43*
Surr: Dibromofluoromethane	*102*			*77-123*	*%REC*	*1*	*08-Sep-2017 17:43*
Surr: Toluene-d8	*103*			*82-127*	*%REC*	*1*	*08-Sep-2017 17:43*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey GW 5040	WorkOrder:HS17090398	
Sample ID:	MWGW05-170908	Lab ID:HS17090398-01	
Collection Date:	08-Sep-2017 09:20	Matrix:Groundwater	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES		**Method:SW8270**			Prep:SW3510 / 08-Sep-2017		Analyst: ACN
1,1´-Biphenyl	U		0.000029	0.00024	mg/L	1	08-Sep-2017 20:29
1,2,4,5-Tetrachlorobenzene	U		0.000048	0.00024	mg/L	1	08-Sep-2017 20:29
1,4-Dioxane	U	n	0.000070	0.00024	mg/L	1	08-Sep-2017 20:29
1-Methylnaphthalene	U	n	0.000012	0.00012	mg/L	1	08-Sep-2017 20:29
2,3,4,6-Tetrachlorophenol	U		0.000067	0.00024	mg/L	1	08-Sep-2017 20:29
2,4,5-Trichlorophenol	U		0.000070	0.00024	mg/L	1	08-Sep-2017 20:29
2,4,6-Trichlorophenol	U		0.000059	0.00024	mg/L	1	08-Sep-2017 20:29
2,4-Dichlorophenol	U		0.000052	0.00024	mg/L	1	08-Sep-2017 20:29
2,4-Dimethylphenol	U		0.000049	0.00024	mg/L	1	08-Sep-2017 20:29
2,4-Dinitrophenol	U		0.00012	0.0012	mg/L	1	08-Sep-2017 20:29
2,4-Dinitrotoluene	U		0.000071	0.00024	mg/L	1	08-Sep-2017 20:29
2,6-Dinitrotoluene	U		0.000051	0.00024	mg/L	1	08-Sep-2017 20:29
2-Chloronaphthalene	U		0.000026	0.00024	mg/L	1	08-Sep-2017 20:29
2-Chlorophenol	U		0.000044	0.00024	mg/L	1	08-Sep-2017 20:29
2-Methylnaphthalene	U		0.000023	0.00012	mg/L	1	08-Sep-2017 20:29
2-Methylphenol	U		0.000055	0.00024	mg/L	1	08-Sep-2017 20:29
2-Nitroaniline	U		0.000050	0.00024	mg/L	1	08-Sep-2017 20:29
2-Nitrophenol	U		0.000041	0.00024	mg/L	1	08-Sep-2017 20:29
3&4-Methylphenol	U		0.000044	0.00024	mg/L	1	08-Sep-2017 20:29
3,3´-Dichlorobenzidine	U		0.000054	0.00024	mg/L	1	08-Sep-2017 20:29
3-Nitroaniline	U		0.000060	0.00024	mg/L	1	08-Sep-2017 20:29
4,6-Dinitro-2-methylphenol	U		0.000024	0.00024	mg/L	1	08-Sep-2017 20:29
4-Bromophenyl phenyl ether	U		0.000062	0.00024	mg/L	1	08-Sep-2017 20:29
4-Chloro-3-methylphenol	U		0.000039	0.00024	mg/L	1	08-Sep-2017 20:29
4-Chlorophenyl phenyl ether	U		0.000054	0.00024	mg/L	1	08-Sep-2017 20:29
4-Nitroaniline	U		0.000043	0.00024	mg/L	1	08-Sep-2017 20:29
4-Nitrophenol	U		0.000057	0.0012	mg/L	1	08-Sep-2017 20:29
Acenaphthene	U		0.000033	0.00012	mg/L	1	08-Sep-2017 20:29
Acenaphthylene	U		0.000018	0.00012	mg/L	1	08-Sep-2017 20:29
Acetophenone	U		0.000029	0.00024	mg/L	1	08-Sep-2017 20:29
Anthracene	U		0.000017	0.00012	mg/L	1	08-Sep-2017 20:29
Atrazine	U		0.000040	0.00024	mg/L	1	08-Sep-2017 20:29
Benz(a)anthracene	U		0.000061	0.00012	mg/L	1	08-Sep-2017 20:29
Benzaldehyde	U	n	0.000037	0.00024	mg/L	1	08-Sep-2017 20:29
Benzo(a)pyrene	U		0.000024	0.00012	mg/L	1	08-Sep-2017 20:29
Benzo(b)fluoranthene	U		0.000028	0.00012	mg/L	1	08-Sep-2017 20:29
Benzo(g,h,i)perylene	U		0.000017	0.00012	mg/L	1	08-Sep-2017 20:29
Benzo(k)fluoranthene	U		0.000023	0.00012	mg/L	1	08-Sep-2017 20:29

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey GW 5040	WorkOrder:HS17090398	
Sample ID:	MWGW05-170908	Lab ID:HS17090398-01	
Collection Date:	08-Sep-2017 09:20	Matrix:Groundwater	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES		**Method:SW8270**			Prep:SW3510 / 08-Sep-2017		Analyst: ACN
Bis(2-chloroethoxy)methane		U	0.000037	0.00024	mg/L	1	08-Sep-2017 20:29
Bis(2-chloroethyl)ether		U	0.000032	0.00024	mg/L	1	08-Sep-2017 20:29
Bis(2-chloroisopropyl)ether		U	0.000085	0.00024	mg/L	1	08-Sep-2017 20:29
Bis(2-ethylhexyl)phthalate		U	0.000045	0.00024	mg/L	1	08-Sep-2017 20:29
Butyl benzyl phthalate		U	0.000023	0.00024	mg/L	1	08-Sep-2017 20:29
Caprolactam		U	0.000055	0.00024	mg/L	1	08-Sep-2017 20:29
Carbazole		U	0.000030	0.00024	mg/L	1	08-Sep-2017 20:29
Chrysene		U	0.000026	0.00012	mg/L	1	08-Sep-2017 20:29
Dibenz(a,h)anthracene		U	0.000029	0.00012	mg/L	1	08-Sep-2017 20:29
Dibenzofuran		U	0.000024	0.00012	mg/L	1	08-Sep-2017 20:29
Diethyl phthalate		U	0.000037	0.00024	mg/L	1	08-Sep-2017 20:29
Dimethyl phthalate		U	0.000050	0.00024	mg/L	1	08-Sep-2017 20:29
Di-n-butyl phthalate		U	0.000024	0.00024	mg/L	1	08-Sep-2017 20:29
Di-n-octyl phthalate		U	0.000024	0.00024	mg/L	1	08-Sep-2017 20:29
Fluoranthene		U	0.000012	0.00012	mg/L	1	08-Sep-2017 20:29
Fluorene		U	0.000037	0.00012	mg/L	1	08-Sep-2017 20:29
Hexachlorobenzene		U	0.000054	0.00024	mg/L	1	08-Sep-2017 20:29
Hexachlorobutadiene		U	0.000037	0.00024	mg/L	1	08-Sep-2017 20:29
Hexachlorocyclopentadiene		U	0.000037	0.00024	mg/L	1	08-Sep-2017 20:29
Hexachloroethane		U	0.000072	0.00024	mg/L	1	08-Sep-2017 20:29
Indeno(1,2,3-cd)pyrene		U	0.000027	0.00012	mg/L	1	08-Sep-2017 20:29
Isophorone		U	0.000030	0.00024	mg/L	1	08-Sep-2017 20:29
Naphthalene		U	0.000024	0.00012	mg/L	1	08-Sep-2017 20:29
Nitrobenzene		U	0.000029	0.00024	mg/L	1	08-Sep-2017 20:29
N-Nitrosodi-n-propylamine		U	0.000039	0.00024	mg/L	1	08-Sep-2017 20:29
N-Nitrosodiphenylamine		U	0.000030	0.00024	mg/L	1	08-Sep-2017 20:29
Pentachlorophenol		U	0.000096	0.00024	mg/L	1	08-Sep-2017 20:29
Phenanthrene		U	0.000026	0.00012	mg/L	1	08-Sep-2017 20:29
Phenol		U	0.000043	0.00024	mg/L	1	08-Sep-2017 20:29
Pyrene		U	0.000023	0.00012	mg/L	1	08-Sep-2017 20:29
Surr: 2,4,6-Tribromophenol	*46.8*			*34-129*	*%REC*	*1*	*08-Sep-2017 20:29*
Surr: 2-Fluorobiphenyl	*58.6*			*40-125*	*%REC*	*1*	*08-Sep-2017 20:29*
Surr: 2-Fluorophenol	*58.0*			*20-120*	*%REC*	*1*	*08-Sep-2017 20:29*
Surr: 4-Terphenyl-d14	*77.9*			*40-135*	*%REC*	*1*	*08-Sep-2017 20:29*
Surr: Nitrobenzene-d5	*60.9*			*41-120*	*%REC*	*1*	*08-Sep-2017 20:29*
Surr: Phenol-d6	*61.0*			*20-120*	*%REC*	*1*	*08-Sep-2017 20:29*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey GW 5040	WorkOrder:HS17090398	
Sample ID:	MWGW05-170908	Lab ID:HS17090398-01	
Collection Date:	08-Sep-2017 09:20	Matrix:Groundwater	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL TEXAS TPH BY TX1005		**Method:TX1005**			Prep:TX1005PR / 08-Sep-2017		Analyst: JLJ
nC6 to nC12		U	0.20	0.49	mg/L	1	08-Sep-2017 19:20
>nC12 to nC28		U	0.20	0.49	mg/L	1	08-Sep-2017 19:20
>nC28 to nC35		U	0.20	0.49	mg/L	1	08-Sep-2017 19:20
Total Petroleum Hydrocarbon		U	0.20	0.49	mg/L	1	08-Sep-2017 19:20
Surr: 2-Fluorobiphenyl	*86.8*			*70-130*	*%REC*	*1*	*08-Sep-2017 19:20*
Surr: Trifluoromethyl benzene	*94.6*			*70-130*	*%REC*	*1*	*08-Sep-2017 19:20*
MISCELLANEOUS PESTICIDES BY SW8081B		**Method:SW8081**			Prep:SW3510 / 08-Sep-2017		Analyst: JLJ
alpha-Chlordane		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
gamma-Chlordane		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
ORGANOCHLORINE PESTICIDES BY SW8081B		**Method:SW8081**			Prep:SW3510 / 08-Sep-2017		Analyst: JLJ
4,4´-DDD		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
4,4´-DDE		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
4,4´-DDT		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
Aldrin		U	0.0000015	0.0000015	mg/L	1	08-Sep-2017 19:56
alpha-BHC		U	0.0000015	0.0000015	mg/L	1	08-Sep-2017 19:56
beta-BHC		U	0.0000015	0.0000015	mg/L	1	08-Sep-2017 19:56
delta-BHC		U	0.0000015	0.0000015	mg/L	1	08-Sep-2017 19:56
Dieldrin	**0.0000049**	P	**0.0000030**	**0.0000030**	**mg/L**	1	08-Sep-2017 19:56
Endosulfan I		U	0.0000015	0.0000015	mg/L	1	08-Sep-2017 19:56
Endosulfan II		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
Endosulfan sulfate		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
Endrin		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
Endrin aldehyde		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
Endrin ketone		U	0.0000030	0.0000030	mg/L	1	08-Sep-2017 19:56
gamma-BHC	**0.0000046**	P	**0.0000015**	**0.0000015**	**mg/L**	1	08-Sep-2017 19:56
Heptachlor		U	0.0000015	0.0000015	mg/L	1	08-Sep-2017 19:56
Heptachlor epoxide	**0.0000045**	P	**0.0000015**	**0.0000015**	**mg/L**	1	08-Sep-2017 19:56
Methoxychlor		U	0.000015	0.000015	mg/L	1	08-Sep-2017 19:56
Toxaphene		U	0.000030	0.000030	mg/L	1	08-Sep-2017 19:56
Surr: Decachlorobiphenyl	*79.1*			*55-145*	*%REC*	*1*	*08-Sep-2017 19:56*
Surr: Tetrachloro-m-xylene	*60.8*			*52-142*	*%REC*	*1*	*08-Sep-2017 19:56*

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client:	Pastor, Behling & Wheeler, LLC	**ANALYTICAL REPORT**	
Project:	USOR Post Harvey GW 5040	WorkOrder:HS17090398	
Sample ID:	MWGW05-170908	Lab ID:HS17090398-01	
Collection Date:	08-Sep-2017 09:20	Matrix:Groundwater	

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
CHLORINATED HERBICIDES BY SW8151A		**Method:SW8151**			Prep:SW8151 / 08-Sep-2017		Analyst: NPI
2,4,5-T	U		0.0000595	0.000238	mg/L	1	08-Sep-2017 21:27
2,4,5-TP (Silvex)	U		0.0000595	0.000238	mg/L	1	08-Sep-2017 21:27
2,4-D	U		0.0000714	0.000238	mg/L	1	08-Sep-2017 21:27
2,4-DB	U		0.0000952	0.000476	mg/L	1	08-Sep-2017 21:27
Dalapon	U		0.0000833	0.000238	mg/L	1	08-Sep-2017 21:27
Dicamba	U		0.0000595	0.000238	mg/L	1	08-Sep-2017 21:27
Dichlorprop	U		0.0000952	0.000476	mg/L	1	08-Sep-2017 21:27
Dinoseb	U		0.0000595	0.000357	mg/L	1	08-Sep-2017 21:27
MCPA	U		0.00964	0.0357	mg/L	1	08-Sep-2017 21:27
MCPP	U		0.00833	0.0357	mg/L	1	08-Sep-2017 21:27
Surr: DCAA	*106*			*50-130*	*%REC*	*1*	*08-Sep-2017 21:27*
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 08-Sep-2017		Analyst: RPM
Aluminum	**0.00445**	J	**0.00180**	**0.0100**	**mg/L**	1	08-Sep-2017 15:38
Antimony	U		0.000400	0.00200	mg/L	1	08-Sep-2017 15:38
Arsenic	**0.000637**	J	**0.000400**	**0.00200**	**mg/L**	1	08-Sep-2017 15:38
Barium	**0.189**		**0.00190**	**0.00400**	**mg/L**	1	08-Sep-2017 15:38
Beryllium	U		0.000200	0.00200	mg/L	1	08-Sep-2017 15:38
Boron	**0.299**		**0.0110**	**0.0200**	**mg/L**	1	08-Sep-2017 16:34
Cobalt	**0.00195**	J	**0.000200**	**0.00500**	**mg/L**	1	08-Sep-2017 15:38
Manganese	**0.110**		**0.000700**	**0.00500**	**mg/L**	1	08-Sep-2017 15:38
Selenium	U		0.00110	0.00200	mg/L	1	08-Sep-2017 15:38
Thallium	U		0.000200	0.00200	mg/L	1	08-Sep-2017 15:38
Vanadium	**0.00110**	J	**0.000600**	**0.00500**	**mg/L**	1	08-Sep-2017 15:38
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 08-Sep-2017		Analyst: RPM
Cadmium	U		0.000200	0.00200	mg/L	1	08-Sep-2017 16:37
Chromium	U		0.000400	0.00500	mg/L	1	08-Sep-2017 16:37
Copper	**0.00103**	J	**0.00100**	**0.00200**	**mg/L**	1	08-Sep-2017 16:37
Lead	U		0.000600	0.00500	mg/L	1	08-Sep-2017 16:37
Nickel	**0.00198**	J	**0.000600**	**0.00500**	**mg/L**	1	08-Sep-2017 16:37
Silver	U		0.000200	0.00500	mg/L	1	08-Sep-2017 16:37
Zinc	**0.00348**	J	**0.00200**	**0.00500**	**mg/L**	1	08-Sep-2017 16:37
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 08-Sep-2017		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	08-Sep-2017 16:24
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**5,360**		**5.00**	**10.0**	**mg/L**	1	08-Sep-2017 13:30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

WEIGHT LOG

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

Batch ID: 119843 **Method:** LOW-LEVEL SEMIVOLATILES **Prep:** 3510_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	820	1 (mL)	0.00122

Batch ID: 119848 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	10	10 (mL)	1

Batch ID: 119849 **Method:** DISSOLVED METALS BY SW6020A **Prep:** 3010A DISS

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	10	10 (mL)	1

Batch ID: 119853 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	40	40 (mL)	1

Batch ID: 119859 **Method:** CHLORINATED HERBICIDES BY SW8151A **Prep:** 3510_H

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	840	10 (mL)	0.0119

Batch ID: 119860 **Method:** MISCELLANEOUS PESTICIDES BY SW8081B **Prep:** 3510_P_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	820	1 (mL)	0.00122
HS17090398-01	1	820	1 (mL)	0.00122

Batch ID: 119868 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS17090398-01	1	30.65	3 (mL)	0.09788

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 119843	**Test Name :** LOW-LEVEL SEMIVOLATILES			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 07:50	08 Sep 2017 20:29	1
Batch ID 119848	**Test Name :** ICP-MS METALS BY SW6020A			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 09:56	08 Sep 2017 16:34	1
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 09:56	08 Sep 2017 15:38	1
Batch ID 119849	**Test Name :** DISSOLVED METALS BY SW6020A			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 09:57	08 Sep 2017 16:37	1
Batch ID 119853	**Test Name :** MERCURY BY SW7470A			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 10:28	08 Sep 2017 16:24	1
Batch ID 119859	**Test Name :** CHLORINATED HERBICIDES BY SW8151A			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 11:48	08 Sep 2017 21:27	1
Batch ID 119860	**Test Name :** MISCELLANEOUS PESTICIDES BY SW8081B			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 11:52	08 Sep 2017 19:56	1
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 11:52	08 Sep 2017 19:56	1
Batch ID 119868	**Test Name :** LOW-LEVEL TEXAS TPH BY TX1005			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20		08 Sep 2017 15:40	08 Sep 2017 19:20	1
Batch ID R301258	**Test Name :** LOW LEVEL VOLATILES BY SW8260C			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20			08 Sep 2017 17:43	1
Batch ID R301259	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C			**Matrix:** Groundwater		
HS17090398-01	MWGW05-170908	08 Sep 2017 09:20			08 Sep 2017 13:30	1

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119859 **Instrument: ECD_9** **Method: SW8151**

MBLK Sample ID: **MBLK-119859** Units: **ug/L** Analysis Date: **08-Sep-2017 19:52**
Client ID: Run ID: **ECD_9_301266** SeqNo: **4221796** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	U	0.200								
2,4,5-TP (Silvex)	U	0.200								
2,4-D	U	0.200								
2,4-DB	U	0.400								
Dalapon	U	0.200								
Dicamba	U	0.200								
Dichlorprop	U	0.400								
Dinoseb	U	0.300								
MCPA	U	30.0								
MCPP	U	30.0								
Surr: DCAA	*4.683*	*0*	*5*	*0*	*93.7*	*50 - 130*				

LCS Sample ID: **LCS-119859** Units: **ug/L** Analysis Date: **08-Sep-2017 20:24**
Client ID: Run ID: **ECD_9_301266** SeqNo: **4221797** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	1.97	0.200	2.5	0	78.8	44 - 122				
2,4,5-TP (Silvex)	2.173	0.200	2.5	0	86.9	49 - 126				
2,4-D	2.34	0.200	2.5	0	93.6	39 - 120				
2,4-DB	2.821	0.400	2.5	0	113	44 - 120				P
Dalapon	2.157	0.200	2.5	0	86.3	40 - 120				
Dicamba	2.174	0.200	2.5	0	87.0	60 - 120				
Dichlorprop	1.925	0.400	2.5	0	77.0	68 - 122				
Dinoseb	1.791	0.300	2.5	0	71.7	28 - 115				
MCPA	177	30.0	250	0	70.8	62 - 144				
MCPP	219.9	30.0	250	0	87.9	60 - 133				
Surr: DCAA	*4.046*	*0*	*5*	*0*	*80.9*	*50 - 130*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119859 **Instrument: ECD_9** **Method: SW8151**

LCSD Sample ID: **LCSD-119859** Units: **ug/L** Analysis Date: **08-Sep-2017 20:55**
Client ID: Run ID: **ECD_9_301266** SeqNo: **4221798** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	2.01	0.200	2.5	0	80.4	44 - 122	1.97	2.01	30	
2,4,5-TP (Silvex)	2.228	0.200	2.5	0	89.1	49 - 126	2.173	2.49	30	
2,4-D	2.267	0.200	2.5	0	90.7	39 - 120	2.34	3.14	30	
2,4-DB	2.673	0.400	2.5	0	107	44 - 120	2.821	5.39	30	
Dalapon	2.176	0.200	2.5	0	87.0	40 - 120	2.157	0.857	30	
Dicamba	2.253	0.200	2.5	0	90.1	60 - 120	2.174	3.55	30	
Dichlorprop	1.907	0.400	2.5	0	76.3	68 - 122	1.925	0.926	30	
Dinoseb	1.849	0.300	2.5	0	73.9	28 - 115	1.791	3.14	30	
MCPA	174.2	30.0	250	0	69.7	62 - 144	177	1.62	30	
MCPP	240.1	30.0	250	0	96.0	60 - 133	219.9	8.8	30	
Surr: DCAA	*4.165*	*0*	*5*	*0*	*83.3*	*50 - 130*	*4.046*	*2.91*	*30*	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119860 **Instrument: ECD_11** **Method: SW8081**

MBLK Sample ID: **MBLK-119860** Units: **ug/L** Analysis Date: **08-Sep-2017 18:56**
Client ID: Run ID: **ECD_11_301264** SeqNo: **4221778** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	U	0.0025								
4,4´-DDE	U	0.0025								
4,4´-DDT	U	0.0025								
Aldrin	U	0.0012								
alpha-BHC	U	0.0012								
beta-BHC	U	0.0012								
delta-BHC	U	0.0012								
Dieldrin	U	0.0025								
Endosulfan I	U	0.0012								
Endosulfan II	U	0.0025								
Endosulfan sulfate	U	0.0025								
Endrin	U	0.0025								
Endrin aldehyde	U	0.0025								
Endrin ketone	U	0.0025								
gamma-BHC	U	0.0012								
Heptachlor	U	0.0012								
Heptachlor epoxide	U	0.0012								
Methoxychlor	U	0.012								
Toxaphene	U	0.025								
Surr: Decachlorobiphenyl	*0.01954*	*0*	*0.02*	*0*	*97.7*	*55 - 145*				
Surr: Tetrachloro-m-xylene	*0.01517*	*0*	*0.02*	*0*	*75.9*	*52 - 142*				

MBLK Sample ID: **MBLK-119860** Units: **ug/L** Analysis Date: **08-Sep-2017 18:56**
Client ID: Run ID: **ECD_11_301264** SeqNo: **4221782** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	U	0.0025								
gamma-Chlordane	U	0.0025								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119860 **Instrument: ECD_11** **Method: SW8081**

LCS Sample ID: **LCS-119860** Units: **ug/L** Analysis Date: **08-Sep-2017 19:16**
Client ID: Run ID: **ECD_11_301264** SeqNo: **4221779** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	0.05104	0.0025	0.05	0	102	53 - 144				
4,4´-DDE	0.04797	0.0025	0.05	0	95.9	55 - 144				
4,4´-DDT	0.0514	0.0025	0.05	0	103	53 - 149				
Aldrin	0.02466	0.0012	0.025	0	98.6	47 - 141				
alpha-BHC	0.02561	0.0012	0.025	0	102	51 - 141				
beta-BHC	0.02426	0.0012	0.025	0	97.0	58 - 144				
delta-BHC	0.01316	0.0012	0.025	0	52.6	48 - 146				
Dieldrin	0.04857	0.0025	0.05	0	97.1	56 - 144				
Endosulfan I	0.02508	0.0012	0.025	0	100	55 - 141				
Endosulfan II	0.04835	0.0025	0.05	0	96.7	57 - 144				
Endosulfan sulfate	0.04608	0.0025	0.05	0	92.2	58 - 145				
Endrin	0.05194	0.0025	0.05	0	104	60 - 163				
Endrin aldehyde	0.04978	0.0025	0.05	0	99.6	59 - 158				
Endrin ketone	0.04902	0.0025	0.05	0	98.0	59 - 154				
gamma-BHC	0.02463	0.0012	0.025	0	98.5	53 - 142				
Heptachlor	0.02786	0.0012	0.025	0	111	51 - 144				
Heptachlor epoxide	0.02541	0.0012	0.025	0	102	55 - 142				
Methoxychlor	0.2543	0.012	0.25	0	102	50 - 150				
Surr: Decachlorobiphenyl	*0.01984*	*0*	*0.02*	*0*	*99.2*	*55 - 145*				
Surr: Tetrachloro-m-xylene	*0.01788*	*0*	*0.02*	*0*	*89.4*	*52 - 142*				

LCS Sample ID: **LCS-119860** Units: **ug/L** Analysis Date: **08-Sep-2017 19:16**
Client ID: Run ID: **ECD_11_301264** SeqNo: **4221783** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	0.02432	0.0025	0.025	0	97.3	55 - 141				
gamma-Chlordane	0.02491	0.0025	0.025	0	99.6	55 - 137				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119860 **Instrument: ECD_11** **Method: SW8081**

LCSD Sample ID: **LCSD-119860** Units: **ug/L** Analysis Date: **08-Sep-2017 19:36**
Client ID: Run ID: **ECD_11_301264** SeqNo: **4221780** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	0.05663	0.0025	0.05	0	113	53 - 144	0.05104	10.4	30	
4,4´-DDE	0.0528	0.0025	0.05	0	106	55 - 144	0.04797	9.59	30	
4,4´-DDT	0.05825	0.0025	0.05	0	117	53 - 149	0.0514	12.5	30	
Aldrin	0.02823	0.0012	0.025	0	113	47 - 141	0.02466	13.5	30	
alpha-BHC	0.02356	0.0012	0.025	0	94.2	51 - 141	0.02561	8.37	30	
beta-BHC	0.02829	0.0012	0.025	0	113	58 - 144	0.02426	15.4	30	
delta-BHC	0.01447	0.0012	0.025	0	57.9	48 - 146	0.01316	9.48	30	
Dieldrin	0.05419	0.0025	0.05	0	108	56 - 144	0.04857	10.9	30	
Endosulfan I	0.02941	0.0012	0.025	0	118	55 - 141	0.02508	15.9	30	
Endosulfan II	0.05421	0.0025	0.05	0	108	57 - 144	0.04835	11.4	30	
Endosulfan sulfate	0.05093	0.0025	0.05	0	102	58 - 145	0.04608	10	30	
Endrin	0.05728	0.0025	0.05	0	115	60 - 163	0.05194	9.78	30	
Endrin aldehyde	0.05478	0.0025	0.05	0	110	59 - 158	0.04978	9.57	30	
Endrin ketone	0.05453	0.0025	0.05	0	109	59 - 154	0.04902	10.6	30	
gamma-BHC	0.02747	0.0012	0.025	0	110	53 - 142	0.02463	10.9	30	
Heptachlor	0.03172	0.0012	0.025	0	127	51 - 144	0.02786	13	30	
Heptachlor epoxide	0.02901	0.0012	0.025	0	116	55 - 142	0.02541	13.3	30	
Methoxychlor	0.2897	0.012	0.25	0	116	50 - 150	0.2543	13	30	
Surr: Decachlorobiphenyl	*0.02216*	*0*	*0.02*	*0*	*111*	*55 - 145*	*0.01984*	*11.1*	*30*	
Surr: Tetrachloro-m-xylene	*0.01829*	*0*	*0.02*	*0*	*91.4*	*52 - 142*	*0.01788*	*2.25*	*30*	

LCSD Sample ID: **LCSD-119860** Units: **ug/L** Analysis Date: **08-Sep-2017 19:36**
Client ID: Run ID: **ECD_11_301264** SeqNo: **4221784** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
alpha-Chlordane	0.02726	0.0025	0.025	0	109	55 - 141	0.02432	11.4	30	
gamma-Chlordane	0.0281	0.0025	0.025	0	112	55 - 137	0.02491	12	30	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119868 **Instrument: FID-10** **Method: TX1005**

MBLK Sample ID: **MBLK-119868** Units: **mg/L** Analysis Date: **08-Sep-2017 16:29**
Client ID: Run ID: **FID-10_301262** SeqNo: **4221749** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	U	0.50								
>nC12 to nC28	U	0.50								
>nC28 to nC35	U	0.50								
Total Petroleum Hydrocarbon	U	0.50								
Surr: 2-Fluorobiphenyl	*1.754*	*0*	*2.5*	*0*	*70.1*	*70 - 130*				
Surr: Trifluoromethyl benzene	*1.852*	*0*	*2.5*	*0*	*74.1*	*70 - 130*				

LCS Sample ID: **LCS-119868** Units: **mg/L** Analysis Date: **08-Sep-2017 16:58**
Client ID: Run ID: **FID-10_301262** SeqNo: **4221750** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	20.84	0.50	25	0	83.4	75 - 125				
>nC12 to nC28	27.11	0.50	25	0	108	75 - 125				
Surr: 2-Fluorobiphenyl	*2.187*	*0*	*2.5*	*0*	*87.5*	*70 - 130*				
Surr: Trifluoromethyl benzene	*2.345*	*0*	*2.5*	*0*	*93.8*	*70 - 130*				

LCSD Sample ID: **LCSD-119868** Units: **mg/L** Analysis Date: **08-Sep-2017 17:26**
Client ID: Run ID: **FID-10_301262** SeqNo: **4221751** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	21.05	0.50	25	0	84.2	75 - 125	20.84	1.02	20	
>nC12 to nC28	27.01	0.50	25	0	108	75 - 125	27.11	0.374	20	
Surr: 2-Fluorobiphenyl	*1.972*	*0*	*2.5*	*0*	*78.9*	*70 - 130*	*2.187*	*10.3*	*20*	
Surr: Trifluoromethyl benzene	*2.161*	*0*	*2.5*	*0*	*86.5*	*70 - 130*	*2.345*	*8.15*	*20*	

MS Sample ID: **HS17090401-08MS** Units: **mg/L** Analysis Date: **08-Sep-2017 18:23**
Client ID: Run ID: **FID-10_301262** SeqNo: **4221753** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	21.12	0.50	24.8	0	85.2	75 - 125				
>nC12 to nC28	26.15	0.50	24.8	0	105	75 - 125				
Surr: 2-Fluorobiphenyl	*2.081*	*0*	*2.48*	*0*	*83.9*	*70 - 130*				
Surr: Trifluoromethyl benzene	*2.174*	*0*	*2.48*	*0*	*87.7*	*70 - 130*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119868 **Instrument: FID-10** **Method: TX1005**

MSD Sample ID: **HS17090401-08MSD** Units: **mg/L** Analysis Date: **08-Sep-2017 18:52**
Client ID: Run ID: **FID-10_301262** SeqNo: **4221754** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	22.06	0.50	24.86	0	88.8	75 - 125	21.12	4.37	20	
>nC12 to nC28	26.74	0.50	24.86	0	108	75 - 125	26.15	2.25	20	
Surr: 2-Fluorobiphenyl	*2.315*	*0*	*2.486*	*0*	*93.1*	*70 - 130*	*2.081*	*10.6*	*20*	
Surr: Trifluoromethyl benzene	*2.421*	*0*	*2.486*	*0*	*97.4*	*70 - 130*	*2.174*	*10.7*	*20*	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119848 **Instrument: ICPMS05** **Method: SW6020**

MBLK Sample ID: **MBLK-119848** Units: **mg/L** Analysis Date: **08-Sep-2017 15:03**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221288** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001817	0.0100								J
Antimony	U	0.00200								
Arsenic	U	0.00200								
Barium	U	0.00400								
Beryllium	U	0.00200								
Cobalt	U	0.00500								
Manganese	U	0.00500								
Selenium	U	0.00200								
Thallium	U	0.00200								
Vanadium	U	0.00500								

MBLK Sample ID: **MBLK-119848** Units: **mg/L** Analysis Date: **08-Sep-2017 16:25**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221613** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	U	0.0200								

LCS Sample ID: **LCS-119848** Units: **mg/L** Analysis Date: **08-Sep-2017 15:06**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221289** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09046	0.0100	0.1	0	90.5	80 - 120				
Antimony	0.04727	0.00200	0.05	0	94.5	80 - 120				
Arsenic	0.04401	0.00200	0.05	0	88.0	80 - 120				
Barium	0.04527	0.00400	0.05	0	90.5	80 - 120				
Beryllium	0.0453	0.00200	0.05	0	90.6	80 - 120				
Cobalt	0.0469	0.00500	0.05	0	93.8	80 - 120				
Manganese	0.04385	0.00500	0.05	0	87.7	80 - 120				
Selenium	0.04519	0.00200	0.05	0	90.4	80 - 120				
Thallium	0.05601	0.00200	0.05	0	112	80 - 120				
Vanadium	0.0443	0.00500	0.05	0	88.6	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119848 **Instrument: ICPMS05** **Method: SW6020**

LCS Sample ID: **LCS-119848** Units: **mg/L** Analysis Date: **08-Sep-2017 16:29**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221614** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.4463	0.0200	0.5	0	89.3	80 - 120				

MS Sample ID: **HS17090378-09MS** Units: **mg/L** Analysis Date: **08-Sep-2017 15:24**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221295** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2499	0.0100	0.1	0.1322	118	80 - 120				
Antimony	0.04749	0.00200	0.05	0.000053	94.9	80 - 120				
Arsenic	0.04599	0.00200	0.05	0.000479	91.0	80 - 120				
Barium	0.3199	0.00400	0.05	0.3213	-2.79	80 - 120				SO
Beryllium	0.04694	0.00200	0.05	0.000055	93.8	80 - 120				
Cobalt	0.04853	0.00500	0.05	0.003098	90.9	80 - 120				
Manganese	0.436	0.00500	0.05	0.394	84.1	80 - 120				O
Selenium	0.04644	0.00200	0.05	0.000176	92.5	80 - 120				
Thallium	0.0565	0.00200	0.05	0.000521	112	80 - 120				
Vanadium	0.04654	0.00500	0.05	0.000713	91.6	80 - 120				

MS Sample ID: **HS17090378-09MS** Units: **mg/L** Analysis Date: **08-Sep-2017 16:47**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221618** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.5284	0.0200	0.5	0.0636	93.0	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119848 **Instrument: ICPMS05** **Method: SW6020**

MSD Sample ID: **HS17090378-09MSD** Units: **mg/L** Analysis Date: **08-Sep-2017 15:32**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221298** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2217	0.0100	0.1	0.1322	89.5	80 - 120	0.2499	12	20	
Antimony	0.04709	0.00200	0.05	0.000053	94.1	80 - 120	0.04749	0.848	20	
Arsenic	0.04418	0.00200	0.05	0.000479	87.4	80 - 120	0.04599	4.01	20	
Barium	0.3372	0.00400	0.05	0.3213	31.8	80 - 120	0.3199	5.26	20	SO
Beryllium	0.04678	0.00200	0.05	0.000055	93.4	80 - 120	0.04694	0.352	20	
Cobalt	0.04864	0.00500	0.05	0.003098	91.1	80 - 120	0.04853	0.231	20	
Manganese	0.4371	0.00500	0.05	0.394	86.3	80 - 120	0.436	0.246	20	O
Selenium	0.04503	0.00200	0.05	0.000176	89.7	80 - 120	0.04644	3.09	20	
Thallium	0.05677	0.00200	0.05	0.000521	113	80 - 120	0.0565	0.478	20	
Vanadium	0.04498	0.00500	0.05	0.000713	88.5	80 - 120	0.04654	3.39	20	

MSD Sample ID: **HS17090378-09MSD** Units: **mg/L** Analysis Date: **08-Sep-2017 16:52**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221619** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	0.544	0.0200	0.5	0.0636	96.1	80 - 120	0.5284	2.91	20	

PDS Sample ID: **HS17090378-09PDS** Units: **mg/L** Analysis Date: **08-Sep-2017 15:29**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221297** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.2088	0.0100	0.1	0.1322	76.6	75 - 125				
Antimony	0.08517	0.00200	0.1	0.000053	85.1	75 - 125				
Arsenic	0.08836	0.00200	0.1	0.000479	87.9	75 - 125				
Barium	0.3463	0.00400	0.1	0.3213	25.0	75 - 125				S
Beryllium	0.09367	0.00200	0.1	0.000055	93.6	75 - 125				
Cobalt	0.0904	0.00500	0.1	0.003098	87.3	75 - 125				
Selenium	0.08892	0.00200	0.1	0.000176	88.7	75 - 125				
Thallium	0.09499	0.00200	0.1	0.000521	94.5	75 - 125				
Vanadium	0.08788	0.00500	0.1	0.000713	87.2	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119848 **Instrument: ICPMS05** **Method: SW6020**

PDS Sample ID: **HS17090378-09PDS** Units: **mg/L** Analysis Date: **08-Sep-2017 16:56**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221620** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	1.005	0.0200	1	0.0636	94.1	75 - 125				

SD Sample ID: **HS17090378-09SD** Units: **mg/L** Analysis Date: **08-Sep-2017 15:21**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221294** PrepDate: **08-Sep-2017** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Aluminum	0.1219	0.0500					0.1322	7.79	10	
Antimony	U	0.0100					0.000053	0	10	
Arsenic	U	0.0100					0.000479	0	10	
Barium	0.3284	0.0200					0.3213	2.22	10	
Beryllium	U	0.0100					0.000055	0	10	
Cobalt	0.003022	0.0250					0.003098	0	10	J
Manganese	0.4073	0.0250					0.394	3.38	10	
Selenium	U	0.0100					0.000176	0	10	
Thallium	U	0.0100					0.000521	0	10	
Vanadium	U	0.0250					0.000713	0	10	

SD Sample ID: **HS17090378-09SD** Units: **mg/L** Analysis Date: **08-Sep-2017 16:43**
Client ID: Run ID: **ICPMS04_301201** SeqNo: **4221617** PrepDate: **08-Sep-2017** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Boron	0.08097	0.100					0.0636	0	10	J

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119849 **Instrument: ICPMS05** **Method: SW6020 (dissolved) (DISSOLVED)**

MBLK Sample ID: **MBLKF1-119849** Units: **mg/L** Analysis Date: **08-Sep-2017 16:00**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221469** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	U	0.00200								
Chromium	U	0.00500								
Copper	U	0.00200								
Lead	U	0.00500								
Nickel	U	0.00500								
Silver	U	0.00500								
Zinc	U	0.00500								

MBLK Sample ID: **MBLK-119849** Units: **mg/L** Analysis Date: **08-Sep-2017 16:02**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221470** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	U	0.00200								
Chromium	U	0.00500								
Copper	U	0.00200								
Lead	U	0.00500								
Nickel	U	0.00500								
Silver	U	0.00500								
Zinc	U	0.00500								

LCS Sample ID: **LCS-119849** Units: **mg/L** Analysis Date: **08-Sep-2017 16:05**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221471** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.04797	0.00200	0.05	0	95.9	80 - 120				
Chromium	0.04662	0.00500	0.05	0	93.2	80 - 120				
Copper	0.04794	0.00200	0.05	0	95.9	80 - 120				
Lead	0.05179	0.00500	0.05	0	104	80 - 120				
Nickel	0.04794	0.00500	0.05	0	95.9	80 - 120				
Silver	0.05508	0.00500	0.05	0	110	80 - 120				
Zinc	0.0511	0.00500	0.05	0	102	80 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119849 **Instrument:** ICPMS05 **Method:** SW6020 (dissolved) (DISSOLVED)

MS Sample ID: **HS17090327-03MS** Units: **mg/L** Analysis Date: **08-Sep-2017 16:18**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221476** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.04108	0.00200	0.05	0.000138	81.9	75 - 125				
Chromium	0.04124	0.00500	0.05	-0.000001	82.5	75 - 125				
Copper	0.04128	0.00200	0.05	0.00045	81.7	75 - 125				
Lead	0.04538	0.00500	0.05	0.000049	90.7	75 - 125				
Nickel	0.05175	0.00500	0.05	0.01092	81.7	75 - 125				
Silver	0.04583	0.00500	0.05	0.000055	91.5	75 - 125				
Zinc	0.04446	0.00500	0.05	0.002188	84.5	75 - 125				

MSD Sample ID: **HS17090327-03MSD** Units: **mg/L** Analysis Date: **08-Sep-2017 16:15**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221475** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.04689	0.00200	0.05	0.000138	93.5	75 - 125	0.04108	13.2	20	
Chromium	0.04526	0.00500	0.05	-0.000001	90.5	75 - 125	0.04124	9.29	20	
Copper	0.04549	0.00200	0.05	0.00045	90.1	75 - 125	0.04128	9.69	20	
Lead	0.05152	0.00500	0.05	0.000049	103	75 - 125	0.04538	12.7	20	
Nickel	0.05682	0.00500	0.05	0.01092	91.8	75 - 125	0.05175	9.33	20	
Silver	0.05062	0.00500	0.05	0.000055	101	75 - 125	0.04583	9.93	20	
Zinc	0.04846	0.00500	0.05	0.002188	92.5	75 - 125	0.04446	8.6	20	

PDS Sample ID: **HS17090327-03PDS** Units: **mg/L** Analysis Date: **08-Sep-2017 16:21**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221477** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.09483	0.00200	0.1	0.000138	94.7	75 - 125				
Chromium	0.08975	0.00500	0.1	-0.000001	89.7	75 - 125				
Copper	0.08825	0.00200	0.1	0.00045	87.8	75 - 125				
Lead	0.1056	0.00500	0.1	0.000049	106	75 - 125				
Nickel	0.09853	0.00500	0.1	0.01092	87.6	75 - 125				
Silver	0.1015	0.00500	0.1	0.000055	101	75 - 125				
Zinc	0.09125	0.00500	0.1	0.002188	89.1	75 - 125				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **119849** **Instrument:** **ICPMS05** **Method:** **SW6020 (dissolved) (DISSOLVED)**

SD Sample ID: **HS17090327-03SD** Units: **mg/L** Analysis Date: **08-Sep-2017 16:10**
Client ID: Run ID: **ICPMS05_301195** SeqNo: **4221473** PrepDate: **08-Sep-2017** DF: **5**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Cadmium	U	0.0100					0.000138	0	10	
Chromium	U	0.0250					-0.000001	0	10	
Copper	U	0.0100					0.00045	0	10	
Lead	U	0.0250					0.000049	0	10	
Nickel	0.01083	0.0250					0.01092	0	10	J
Silver	U	0.0250					0.000055	0	10	
Zinc	U	0.0250					0.002188	0	10	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119853 **Instrument: HG02** **Method: SW7470**

MBLK Sample ID: **MBLK-119853** Units: **mg/L** Analysis Date: **08-Sep-2017 16:13**
Client ID: Run ID: **HG02_301248** SeqNo: **4221532** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.000200								

LCS Sample ID: **LCS-119853** Units: **mg/L** Analysis Date: **08-Sep-2017 16:17**
Client ID: Run ID: **HG02_301248** SeqNo: **4221533** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00523	0.000200	0.005	0	105	80 - 124				

MS Sample ID: **HS17090354-02MS** Units: **mg/L** Analysis Date: **08-Sep-2017 16:20**
Client ID: Run ID: **HG02_301248** SeqNo: **4221535** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00469	0.000200	0.005	0.00001	93.6	80 - 124				

MSD Sample ID: **HS17090354-02MSD** Units: **mg/L** Analysis Date: **08-Sep-2017 16:22**
Client ID: Run ID: **HG02_301248** SeqNo: **4221536** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00482	0.000200	0.005	0.00001	96.2	80 - 124	0.00469	2.73	20	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:16**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221735** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	U	0.20								
1,2,4,5-Tetrachlorobenzene	U	0.20								
1,4-Dioxane	U	0.20								
1-Methylnaphthalene	U	0.10								
2,3,4,6-Tetrachlorophenol	U	0.20								
2,4,5-Trichlorophenol	U	0.20								
2,4,6-Trichlorophenol	U	0.20								
2,4-Dichlorophenol	U	0.20								
2,4-Dimethylphenol	U	0.20								
2,4-Dinitrophenol	U	1.0								
2,4-Dinitrotoluene	U	0.20								
2,6-Dinitrotoluene	U	0.20								
2-Chloronaphthalene	U	0.20								
2-Chlorophenol	U	0.20								
2-Methylnaphthalene	U	0.10								
2-Methylphenol	U	0.20								
2-Nitroaniline	U	0.20								
2-Nitrophenol	U	0.20								
3&4-Methylphenol	U	0.20								
3,3´-Dichlorobenzidine	U	0.20								
3-Nitroaniline	U	0.20								
4,6-Dinitro-2-methylphenol	U	0.20								
4-Bromophenyl phenyl ether	U	0.20								
4-Chloro-3-methylphenol	U	0.20								
4-Chlorophenyl phenyl ether	U	0.20								
4-Nitroaniline	U	0.20								
4-Nitrophenol	U	1.0								
Acenaphthene	U	0.10								
Acenaphthylene	U	0.10								
Acetophenone	U	0.20								
Anthracene	U	0.10								
Atrazine	U	0.20								
Benz(a)anthracene	U	0.10								
Benzaldehyde	U	0.20								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:16**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221735** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	U	0.10								
Benzo(b)fluoranthene	U	0.10								
Benzo(g,h,i)perylene	U	0.10								
Benzo(k)fluoranthene	U	0.10								
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-chloroethyl)ether	U	0.20								
Bis(2-chloroisopropyl)ether	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Butyl benzyl phthalate	U	0.20								
Caprolactam	U	0.20								
Carbazole	U	0.20								
Chrysene	U	0.10								
Dibenz(a,h)anthracene	U	0.10								
Dibenzofuran	U	0.10								
Diethyl phthalate	U	0.20								
Dimethyl phthalate	U	0.20								
Di-n-butyl phthalate	U	0.20								
Di-n-octyl phthalate	U	0.20								
Fluoranthene	U	0.10								
Fluorene	U	0.10								
Hexachlorobenzene	U	0.20								
Hexachlorobutadiene	U	0.20								
Hexachlorocyclopentadiene	U	0.20								
Hexachloroethane	U	0.20								
Indeno(1,2,3-cd)pyrene	U	0.10								
Isophorone	U	0.20								
Naphthalene	U	0.10								
Nitrobenzene	U	0.20								
N-Nitrosodi-n-propylamine	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.10								
Phenol	U	0.20								
Pyrene	U	0.10								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

MBLK Sample ID: **MBLK-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:16**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221735** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*1.811*	*0.20*	*5*	*0*	*36.2*	*34 - 129*				
Surr: 2-Fluorobiphenyl	*3.337*	*0.20*	*5*	*0*	*66.7*	*40 - 125*				
Surr: 2-Fluorophenol	*2.65*	*0.20*	*5*	*0*	*53.0*	*20 - 120*				
Surr: 4-Terphenyl-d14	*4.213*	*0.20*	*5*	*0*	*84.3*	*40 - 135*				
Surr: Nitrobenzene-d5	*3.535*	*0.20*	*5*	*0*	*70.7*	*41 - 120*				
Surr: Phenol-d6	*2.976*	*0.20*	*5*	*0*	*59.5*	*20 - 120*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:35**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221736** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.067	0.20	5	0	61.3	45 - 125				
1,2,4,5-Tetrachlorobenzene	3.206	0.20	5	0	64.1	40 - 140				
1,4-Dioxane	2.107	0.20	5	0	42.1	30 - 140				
1-Methylnaphthalene	2.693	0.10	5	0	53.9	45 - 120				
2,3,4,6-Tetrachlorophenol	3.036	0.20	5	0	60.7	30 - 140				
2,4,5-Trichlorophenol	3.258	0.20	5	0	65.2	46 - 120				
2,4,6-Trichlorophenol	2.616	0.20	5	0	52.3	42 - 120				
2,4-Dichlorophenol	2.509	0.20	5	0	50.2	49 - 120				
2,4-Dimethylphenol	2.93	0.20	5	0	58.6	35 - 120				
2,4-Dinitrophenol	1.951	1.0	5	0	39.0	15 - 120				
2,4-Dinitrotoluene	3.038	0.20	5	0	60.8	50 - 122				
2,6-Dinitrotoluene	2.972	0.20	5	0	59.4	50 - 120				
2-Chloronaphthalene	3.003	0.20	5	0	60.1	50 - 120				
2-Chlorophenol	2.715	0.20	5	0	54.3	40 - 120				
2-Methylnaphthalene	2.716	0.10	5	0	54.3	50 - 120				
2-Methylphenol	2.966	0.20	5	0	59.3	45 - 120				
2-Nitroaniline	4.268	0.20	5	0	85.4	28 - 139				
2-Nitrophenol	2.484	0.20	5	0	49.7	40 - 120				
3&4-Methylphenol	3.104	0.20	5	0	62.1	35 - 120				
3,3´-Dichlorobenzidine	4.102	0.20	5	0	82.0	15 - 120				
3-Nitroaniline	2.978	0.20	5	0	59.6	30 - 120				
4,6-Dinitro-2-methylphenol	2.366	0.20	5	0	47.3	25 - 121				
4-Bromophenyl phenyl ether	2.78	0.20	5	0	55.6	45 - 120				
4-Chloro-3-methylphenol	2.78	0.20	5	0	55.6	47 - 120				
4-Chlorophenyl phenyl ether	2.818	0.20	5	0	56.4	50 - 120				
4-Nitroaniline	3.369	0.20	5	0	67.4	30 - 133				
4-Nitrophenol	1.903	1.0	5	0	38.1	30 - 130				
Acenaphthene	3.178	0.10	5	0	63.6	45 - 120				
Acenaphthylene	3.184	0.10	5	0	63.7	47 - 120				
Acetophenone	2.249	0.20	5	0	45.0	40 - 120				
Anthracene	3.279	0.10	5	0	65.6	45 - 120				
Atrazine	2.291	0.20	5	0	45.8	40 - 130				
Benz(a)anthracene	3.002	0.10	5	0	60.0	40 - 120				
Benzaldehyde	1.123	0.20	5	0	22.5	15 - 120				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:35**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221736** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	3.852	0.10	5	0	77.0	45 - 120				
Benzo(b)fluoranthene	3.071	0.10	5	0	61.4	50 - 120				
Benzo(g,h,i)perylene	3.824	0.10	5	0	76.5	42 - 127				
Benzo(k)fluoranthene	4.049	0.10	5	0	81.0	45 - 127				
Bis(2-chloroethoxy)methane	2.921	0.20	5	0	58.4	45 - 120				
Bis(2-chloroethyl)ether	2.841	0.20	5	0	56.8	37 - 121				
Bis(2-chloroisopropyl)ether	2.85	0.20	5	0	57.0	40 - 120				
Bis(2-ethylhexyl)phthalate	3.783	0.20	5	0	75.7	40 - 139				
Butyl benzyl phthalate	4.024	0.20	5	0	80.5	47 - 123				
Caprolactam	2.923	0.20	5	0	58.5	35 - 134				
Carbazole	3.336	0.20	5	0	66.7	42 - 128				
Chrysene	3.645	0.10	5	0	72.9	43 - 120				
Dibenz(a,h)anthracene	3.731	0.10	5	0	74.6	45 - 125				
Dibenzofuran	2.961	0.10	5	0	59.2	50 - 120				
Diethyl phthalate	3.328	0.20	5	0	66.6	41 - 120				
Dimethyl phthalate	3.14	0.20	5	0	62.8	40 - 122				
Di-n-butyl phthalate	3.526	0.20	5	0	70.5	45 - 123				
Di-n-octyl phthalate	4.872	0.20	5	0	97.4	45 - 129				
Fluoranthene	3.062	0.10	5	0	61.2	45 - 125				
Fluorene	2.881	0.10	5	0	57.6	49 - 120				
Hexachlorobenzene	2.902	0.20	5	0	58.0	48 - 120				
Hexachlorobutadiene	2.475	0.20	5	0	49.5	40 - 120				
Hexachlorocyclopentadiene	2.222	0.20	5	0	44.4	34 - 136				
Hexachloroethane	3.197	0.20	5	0	63.9	40 - 120				
Indeno(1,2,3-cd)pyrene	4.426	0.10	5	0	88.5	41 - 128				
Isophorone	2.641	0.20	5	0	52.8	40 - 121				
Naphthalene	2.987	0.10	5	0	59.7	45 - 120				
Nitrobenzene	2.771	0.20	5	0	55.4	44 - 120				
N-Nitrosodi-n-propylamine	2.942	0.20	5	0	58.8	40 - 120				
N-Nitrosodiphenylamine	3.129	0.20	5	0	62.6	40 - 125				
Pentachlorophenol	1.7	0.20	5	0	34.0	19 - 121				
Phenanthrene	2.86	0.10	5	0	57.2	45 - 121				
Phenol	2.78	0.20	5	0	55.6	20 - 124				
Pyrene	3.28	0.10	5	0	65.6	40 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

LCS Sample ID: **LCS-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:35**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221736** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*2.859*	*0.20*	*5*	*0*	*57.2*	*34 - 129*				
Surr: 2-Fluorobiphenyl	*3.498*	*0.20*	*5*	*0*	*70.0*	*40 - 125*				
Surr: 2-Fluorophenol	*3.204*	*0.20*	*5*	*0*	*64.1*	*20 - 120*				
Surr: 4-Terphenyl-d14	*3.509*	*0.20*	*5*	*0*	*70.2*	*40 - 135*				
Surr: Nitrobenzene-d5	*3.033*	*0.20*	*5*	*0*	*60.7*	*41 - 120*				
Surr: Phenol-d6	*3.521*	*0.20*	*5*	*0*	*70.4*	*20 - 120*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

LCSD Sample ID: **LCSD-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:54**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221737** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1´-Biphenyl	3.066	0.20	5	0	61.3	45 - 125	3.067	0.0222	20	
1,2,4,5-Tetrachlorobenzene	3.188	0.20	5	0	63.8	40 - 140	3.206	0.546	20	
1,4-Dioxane	2.98	0.20	5	0	59.6	30 - 140	2.107	34.3	20	R
1-Methylnaphthalene	3.06	0.10	5	0	61.2	45 - 120	2.693	12.8	20	
2,3,4,6-Tetrachlorophenol	3.152	0.20	5	0	63.0	30 - 140	3.036	3.75	20	
2,4,5-Trichlorophenol	3.081	0.20	5	0	61.6	46 - 120	3.258	5.61	20	
2,4,6-Trichlorophenol	2.845	0.20	5	0	56.9	42 - 120	2.616	8.38	20	
2,4-Dichlorophenol	3.429	0.20	5	0	68.6	49 - 120	2.509	31	20	R
2,4-Dimethylphenol	3.738	0.20	5	0	74.8	35 - 120	2.93	24.2	20	R
2,4-Dinitrophenol	1.826	1.0	5	0	36.5	15 - 120	1.951	6.58	50	
2,4-Dinitrotoluene	3.268	0.20	5	0	65.4	50 - 122	3.038	7.31	20	
2,6-Dinitrotoluene	3.509	0.20	5	0	70.2	50 - 120	2.972	16.6	20	
2-Chloronaphthalene	3.246	0.20	5	0	64.9	50 - 120	3.003	7.78	20	
2-Chlorophenol	2.821	0.20	5	0	56.4	40 - 120	2.715	3.84	20	
2-Methylnaphthalene	3.052	0.10	5	0	61.0	50 - 120	2.716	11.6	20	
2-Methylphenol	2.799	0.20	5	0	56.0	45 - 120	2.966	5.78	20	
2-Nitroaniline	4.238	0.20	5	0	84.8	28 - 139	4.268	0.712	20	
2-Nitrophenol	2.946	0.20	5	0	58.9	40 - 120	2.484	17	20	
3&4-Methylphenol	2.828	0.20	5	0	56.6	35 - 120	3.104	9.32	20	
3,3´-Dichlorobenzidine	5.769	0.20	5	0	115	15 - 120	4.102	33.8	20	R
3-Nitroaniline	2.979	0.20	5	0	59.6	30 - 120	2.978	0.0278	20	
4,6-Dinitro-2-methylphenol	2.602	0.20	5	0	52.0	25 - 121	2.366	9.5	30	
4-Bromophenyl phenyl ether	3.04	0.20	5	0	60.8	45 - 120	2.78	8.95	20	
4-Chloro-3-methylphenol	3.465	0.20	5	0	69.3	47 - 120	2.78	21.9	20	R
4-Chlorophenyl phenyl ether	2.906	0.20	5	0	58.1	50 - 120	2.818	3.07	20	
4-Nitroaniline	2.494	0.20	5	0	49.9	30 - 133	3.369	29.8	20	R
4-Nitrophenol	2.532	1.0	5	0	50.6	30 - 130	1.903	28.3	20	R
Acenaphthene	3.184	0.10	5	0	63.7	45 - 120	3.178	0.202	20	
Acenaphthylene	3.227	0.10	5	0	64.5	47 - 120	3.184	1.34	20	
Acetophenone	2.426	0.20	5	0	48.5	40 - 120	2.249	7.59	20	
Anthracene	3.212	0.10	5	0	64.2	45 - 120	3.279	2.07	20	
Atrazine	2.634	0.20	5	0	52.7	40 - 130	2.291	13.9	20	
Benz(a)anthracene	3.466	0.10	5	0	69.3	40 - 120	3.002	14.3	20	
Benzaldehyde	1.151	0.20	5	0	23.0	15 - 120	1.123	2.44	30	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

LCSD Sample ID: **LCSD-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:54**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221737** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzo(a)pyrene	3.187	0.10	5	0	63.7	45 - 120	3.852	18.9	20	
Benzo(b)fluoranthene	3.002	0.10	5	0	60.0	50 - 120	3.071	2.29	20	
Benzo(g,h,i)perylene	3.601	0.10	5	0	72.0	42 - 127	3.824	6.01	20	
Benzo(k)fluoranthene	3.605	0.10	5	0	72.1	45 - 127	4.049	11.6	20	
Bis(2-chloroethoxy)methane	3.268	0.20	5	0	65.4	45 - 120	2.921	11.2	20	
Bis(2-chloroethyl)ether	2.659	0.20	5	0	53.2	37 - 121	2.841	6.61	20	
Bis(2-chloroisopropyl)ether	2.497	0.20	5	0	49.9	40 - 120	2.85	13.2	20	
Bis(2-ethylhexyl)phthalate	4.038	0.20	5	0	80.8	40 - 139	3.783	6.54	20	
Butyl benzyl phthalate	3.912	0.20	5	0	78.2	47 - 123	4.024	2.82	20	
Caprolactam	3.29	0.20	5	0	65.8	35 - 134	2.923	11.8	20	
Carbazole	3.573	0.20	5	0	71.5	42 - 128	3.336	6.85	20	
Chrysene	3.532	0.10	5	0	70.6	43 - 120	3.645	3.14	20	
Dibenz(a,h)anthracene	3.496	0.10	5	0	69.9	45 - 125	3.731	6.5	20	
Dibenzofuran	3.105	0.10	5	0	62.1	50 - 120	2.961	4.73	20	
Diethyl phthalate	3.288	0.20	5	0	65.8	41 - 120	3.328	1.23	20	
Dimethyl phthalate	3.194	0.20	5	0	63.9	40 - 122	3.14	1.72	20	
Di-n-butyl phthalate	3.686	0.20	5	0	73.7	45 - 123	3.526	4.46	20	
Di-n-octyl phthalate	4.254	0.20	5	0	85.1	45 - 129	4.872	13.6	20	
Fluoranthene	3.261	0.10	5	0	65.2	45 - 125	3.062	6.3	20	
Fluorene	3.163	0.10	5	0	63.3	49 - 120	2.881	9.32	20	
Hexachlorobenzene	4.391	0.20	5	0	87.8	48 - 120	2.902	40.8	20	R
Hexachlorobutadiene	3.049	0.20	5	0	61.0	40 - 120	2.475	20.8	20	R
Hexachlorocyclopentadiene	2.077	0.20	5	0	41.5	34 - 136	2.222	6.74	20	
Hexachloroethane	2.814	0.20	5	0	56.3	40 - 120	3.197	12.8	20	
Indeno(1,2,3-cd)pyrene	3.958	0.10	5	0	79.2	41 - 128	4.426	11.2	20	
Isophorone	3.281	0.20	5	0	65.6	40 - 121	2.641	21.6	20	R
Naphthalene	3.33	0.10	5	0	66.6	45 - 120	2.987	10.9	20	
Nitrobenzene	3.308	0.20	5	0	66.2	44 - 120	2.771	17.7	20	
N-Nitrosodi-n-propylamine	2.804	0.20	5	0	56.1	40 - 120	2.942	4.78	20	
N-Nitrosodiphenylamine	3.476	0.20	5	0	69.5	40 - 125	3.129	10.5	20	
Pentachlorophenol	2.055	0.20	5	0	41.1	19 - 121	1.7	18.9	20	
Phenanthrene	3.118	0.10	5	0	62.4	45 - 121	2.86	8.62	20	
Phenol	2.927	0.20	5	0	58.5	20 - 124	2.78	5.16	20	
Pyrene	3.473	0.10	5	0	69.5	40 - 130	3.28	5.74	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: 119843 **Instrument: SV-6** **Method: SW8270**

LCSD Sample ID: **LCSD-119843** Units: **ug/L** Analysis Date: **08-Sep-2017 18:54**
Client ID: Run ID: **SV-6_301260** SeqNo: **4221737** PrepDate: **08-Sep-2017** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	*3.231*	*0.20*	*5*	*0*	*64.6*	*34 - 129*	*2.859*	*12.2*	*20*	
Surr: 2-Fluorobiphenyl	*3.434*	*0.20*	*5*	*0*	*68.7*	*40 - 125*	*3.498*	*1.87*	*20*	
Surr: 2-Fluorophenol	*3.081*	*0.20*	*5*	*0*	*61.6*	*20 - 120*	*3.204*	*3.91*	*20*	
Surr: 4-Terphenyl-d14	*3.618*	*0.20*	*5*	*0*	*72.4*	*40 - 135*	*3.509*	*3.07*	*20*	
Surr: Nitrobenzene-d5	*3.773*	*0.20*	*5*	*0*	*75.5*	*41 - 120*	*3.033*	*21.7*	*20*	R
Surr: Phenol-d6	*3.117*	*0.20*	*5*	*0*	*62.3*	*20 - 120*	*3.521*	*12.2*	*20*	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MBLK Sample ID: **VBLKW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:55**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221697** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	U	1.0								
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichlor-1,2,2-trifluoroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,3-Trichlorobenzene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2,4-Trimethylbenzene	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	1.0								
1,3,5-Trimethylbenzene	U	1.0								
1,3-Dichlorobenzene	U	1.0								
1,4-Dichlorobenzene	U	1.0								
2-Butanone	U	2.0								
2-Hexanone	U	2.0								
4-Methyl-2-pentanone	U	2.0								
Acetone	U	2.0								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.0								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	1.0								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MBLK Sample ID: **VBLKW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:55**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221697** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	1.0								
Methyl tert-butyl ether	U	1.0								
Methylcyclohexane	U	1.0								
Methylene chloride	U	2.0								
n-Butylbenzene	U	1.0								
n-Propylbenzene	U	1.0								
sec-Butylbenzene	U	1.0								
Styrene	U	1.0								
tert-Butylbenzene	U	1.0								
Tetrachloroethene	U	1.0								
Toluene	U	1.0								
trans-1,2-Dichloroethene	U	1.0								
trans-1,3-Dichloropropene	U	1.0								
Trichloroethene	U	1.0								
Trichlorofluoromethane	U	1.0								
Vinyl chloride	U	1.0								
Xylenes, Total	U	1.0								
Surr: 1,2-Dichloroethane-d4	*49.67*	*1.0*	*50*	*0*	*99.3*	*70 - 123*				
Surr: 4-Bromofluorobenzene	*48.85*	*1.0*	*50*	*0*	*97.7*	*82 - 115*				
Surr: Dibromofluoromethane	*52.87*	*1.0*	*50*	*0*	*106*	*73 - 126*				
Surr: Toluene-d8	*51.12*	*1.0*	*50*	*0*	*102*	*81 - 120*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: R301258 **Instrument: VOA2** **Method: SW8260**

LCS Sample ID: **VLCSW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:06**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221695** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	45.58	1.0	50	0	91.2	77 - 118				
1,1,1-Trichloroethane	50.12	1.0	50	0	100	70 - 130				
1,1,2,2-Tetrachloroethane	44.05	1.0	50	0	88.1	70 - 120				
1,1,2-Trichlor-1,2,2-trifluoroethane	53.49	1.0	50	0	107	70 - 130				
1,1,2-Trichloroethane	46.19	1.0	50	0	92.4	77 - 113				
1,1-Dichloroethane	49.23	1.0	50	0	98.5	71 - 122				
1,1-Dichloroethene	50.3	1.0	50	0	101	70 - 130				
1,2,3-Trichlorobenzene	48.46	1.0	50	0	96.9	70 - 130				
1,2,4-Trichlorobenzene	50.77	1.0	50	0	102	77 - 126				
1,2,4-Trimethylbenzene	52.1	1.0	50	0	104	73 - 121				
1,2-Dibromoethane	46.91	1.0	50	0	93.8	76 - 123				
1,2-Dichlorobenzene	56.38	1.0	50	0	113	77 - 113				
1,2-Dichloroethane	45.59	1.0	50	0	91.2	70 - 124				
1,2-Dichloropropane	54.73	1.0	50	0	109	72 - 119				
1,3,5-Trimethylbenzene	51.78	1.0	50	0	104	75 - 118				
1,3-Dichlorobenzene	55.87	1.0	50	0	112	78 - 118				
1,4-Dichlorobenzene	54.81	1.0	50	0	110	79 - 113				
2-Butanone	99.84	2.0	100	0	99.8	70 - 130				
2-Hexanone	86.38	2.0	100	0	86.4	70 - 130				
4-Methyl-2-pentanone	87.77	2.0	100	0	87.8	70 - 130				
Acetone	98.54	2.0	100	0	98.5	70 - 130				
Benzene	48.37	1.0	50	0	96.7	74 - 120				
Bromodichloromethane	48.68	1.0	50	0	97.4	74 - 122				
Bromoform	43.63	1.0	50	0	87.3	73 - 128				
Bromomethane	42.62	1.0	50	0	85.2	70 - 130				
Carbon disulfide	116.3	2.0	100	0	116	70 - 130				
Carbon tetrachloride	52.53	1.0	50	0	105	71 - 125				
Chlorobenzene	45.98	1.0	50	0	92.0	76 - 113				
Chloroethane	50.58	1.0	50	0	101	70 - 130				
Chloroform	48.14	1.0	50	0	96.3	71 - 121				
Chloromethane	54.2	1.0	50	0	108	70 - 129				
cis-1,2-Dichloroethene	47.58	1.0	50	0	95.2	75 - 122				
cis-1,3-Dichloropropene	49.11	1.0	50	0	98.2	73 - 127				
Cyclohexane	50.83	1.0	50	0	102	70 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

LCS Sample ID: **VLCSW-170908** Units: **ug/L** Analysis Date: **08-Sep-2017 16:06**
Client ID: Run ID: **VOA2_301258** SeqNo: **4221695** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	45.54	1.0	50	0	91.1	77 - 122				
Dichlorodifluoromethane	59.24	1.0	50	0	118	70 - 130				
Ethylbenzene	46.53	1.0	50	0	93.1	77 - 117				
Isopropylbenzene	48.44	1.0	50	0	96.9	73 - 127				
Methyl acetate	48.8	1.0	50	0	97.6	76 - 122				
Methyl tert-butyl ether	45.95	1.0	50	0	91.9	70 - 130				
Methylcyclohexane	49.7	1.0	50	0	99.4	61 - 157				
Methylene chloride	55.32	2.0	50	0	111	70 - 127				
n-Butylbenzene	58.11	1.0	50	0	116	72 - 130				
n-Propylbenzene	51.45	1.0	50	0	103	73 - 124				
sec-Butylbenzene	58.61	1.0	50	0	117	73 - 128				
Styrene	45.82	1.0	50	0	91.6	72 - 126				
tert-Butylbenzene	57.53	1.0	50	0	115	73 - 124				
Tetrachloroethene	52.27	1.0	50	0	105	76 - 119				
Toluene	47.63	1.0	50	0	95.3	77 - 118				
trans-1,2-Dichloroethene	48.94	1.0	50	0	97.9	72 - 127				
trans-1,3-Dichloropropene	49.21	1.0	50	0	98.4	77 - 119				
Trichloroethene	47.07	1.0	50	0	94.1	77 - 121				
Trichlorofluoromethane	49.87	1.0	50	0	99.7	70 - 130				
Vinyl chloride	51.71	1.0	50	0	103	70 - 130				
Xylenes, Total	137.3	1.0	150	0	91.5	75 - 122				
Surr: 1,2-Dichloroethane-d4	*50.02*	*1.0*	*50*	*0*	*100*	*70 - 130*				
Surr: 4-Bromofluorobenzene	*50*	*1.0*	*50*	*0*	*100*	*82 - 115*				
Surr: Dibromofluoromethane	*49.47*	*1.0*	*50*	*0*	*98.9*	*73 - 126*				
Surr: Toluene-d8	*49.32*	*1.0*	*50*	*0*	*98.6*	*81 - 120*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MS Sample ID: **HS17090398-01MS** Units: **ug/L** Analysis Date: **08-Sep-2017 18:08**
Client ID: **MWGW05-170908** Run ID: **VOA2_301258** SeqNo: **4221726** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	44.22	1.0	50	0	88.4	70 - 120				
1,1,1-Trichloroethane	50.16	1.0	50	0	100	70 - 130				
1,1,2,2-Tetrachloroethane	40.73	1.0	50	0	81.5	70 - 123				
1,1,2-Trichlor-1,2,2-trifluoroethane	50.6	1.0	50	0	101	70 - 130				
1,1,2-Trichloroethane	43.22	1.0	50	0	86.4	70 - 117				
1,1-Dichloroethane	47.83	1.0	50	0	95.7	70 - 127				
1,1-Dichloroethene	49.62	1.0	50	0	99.2	70 - 130				
1,2,3-Trichlorobenzene	44.93	1.0	50	0	89.9	70 - 130				
1,2,4-Trichlorobenzene	48.07	1.0	50	0	96.1	70 - 125				
1,2,4-Trimethylbenzene	49.89	1.0	50	0	99.8	70 - 125				
1,2-Dibromoethane	43.45	1.0	50	0	86.9	70 - 124				
1,2-Dichlorobenzene	52.63	1.0	50	0	105	70 - 115				
1,2-Dichloroethane	43.88	1.0	50	0	87.8	70 - 127				
1,2-Dichloropropane	52.44	1.0	50	0	105	70 - 122				
1,3,5-Trimethylbenzene	49.97	1.0	50	0	99.9	70 - 126				
1,3-Dichlorobenzene	54.21	1.0	50	0	108	70 - 119				
1,4-Dichlorobenzene	51.73	1.0	50	0	103	70 - 114				
2-Butanone	89.57	2.0	100	0	89.6	70 - 130				
2-Hexanone	80.58	2.0	100	0	80.6	70 - 130				
4-Methyl-2-pentanone	83.42	2.0	100	0	83.4	70 - 130				
Acetone	114.5	2.0	100	17.86	96.7	70 - 130				
Benzene	47.37	1.0	50	0	94.7	70 - 127				
Bromodichloromethane	45.51	1.0	50	0	91.0	70 - 124				
Bromoform	40.14	1.0	50	0	80.3	70 - 129				
Bromomethane	47.36	1.0	50	0	94.7	70 - 130				
Carbon disulfide	115.7	2.0	100	0	116	70 - 130				
Carbon tetrachloride	53.6	1.0	50	0	107	70 - 130				
Chlorobenzene	44.44	1.0	50	0	88.9	70 - 114				
Chloroethane	49.16	1.0	50	0	98.3	70 - 130				
Chloroform	47.46	1.0	50	0	94.9	70 - 125				
Chloromethane	46.45	1.0	50	0	92.9	70 - 130				
cis-1,2-Dichloroethene	47.26	1.0	50	0	94.5	70 - 128				
cis-1,3-Dichloropropene	46.29	1.0	50	0	92.6	70 - 125				
Cyclohexane	52.61	1.0	50	0	105	70 - 130				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MS Sample ID: **HS17090398-01MS** Units: **ug/L** Analysis Date: **08-Sep-2017 18:08**
Client ID: **MWGW05-170908** Run ID: **VOA2_301258** SeqNo: **4221726** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	42.57	1.0	50	0	85.1	70 - 124				
Dichlorodifluoromethane	33.46	1.0	50	0	66.9	70 - 130				S
Ethylbenzene	45.58	1.0	50	0	91.2	70 - 124				
Isopropylbenzene	47.68	1.0	50	0	95.4	70 - 130				
Methyl acetate	45.02	1.0	50	0	90.0	76 - 122				
Methyl tert-butyl ether	42.65	1.0	50	0	85.3	70 - 130				
Methylcyclohexane	51.63	1.0	50	0	103	61 - 158				
Methylene chloride	52.43	2.0	50	0	105	70 - 128				
n-Butylbenzene	57.7	1.0	50	0	115	70 - 130				
n-Propylbenzene	50.97	1.0	50	0	102	70 - 130				
sec-Butylbenzene	58.96	1.0	50	0	118	70 - 130				
Styrene	44.3	1.0	50	0	88.6	70 - 130				
tert-Butylbenzene	57.53	1.0	50	0	115	70 - 130				
Tetrachloroethene	52.27	1.0	50	0	105	70 - 130				
Toluene	46.87	1.0	50	0	93.7	70 - 123				
trans-1,2-Dichloroethene	49.29	1.0	50	0	98.6	70 - 130				
trans-1,3-Dichloropropene	45.96	1.0	50	0	91.9	70 - 121				
Trichloroethene	47.15	1.0	50	0	94.3	70 - 129				
Trichlorofluoromethane	49.69	1.0	50	0	99.4	70 - 130				
Vinyl chloride	49.12	1.0	50	0	98.2	70 - 130				
Xylenes, Total	135.6	1.0	150	0	90.4	70 - 130				
Surr: 1,2-Dichloroethane-d4	*51.55*	*1.0*	*50*	*0*	*103*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*49.4*	*1.0*	*50*	*0*	*98.8*	*81 - 113*				
Surr: Dibromofluoromethane	*49.45*	*1.0*	*50*	*0*	*98.9*	*77 - 123*				
Surr: Toluene-d8	*49.67*	*1.0*	*50*	*0*	*99.3*	*82 - 127*				

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MSD Sample ID: **HS17090398-01MSD** Units: **ug/L** Analysis Date: **08-Sep-2017 18:32**
Client ID: **MWGW05-170908** Run ID: **VOA2_301258** SeqNo: **4221728** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	43.44	1.0	50	0	86.9	70 - 120	44.22	1.79	20	
1,1,1-Trichloroethane	49.43	1.0	50	0	98.9	70 - 130	50.16	1.48	20	
1,1,2,2-Tetrachloroethane	41.63	1.0	50	0	83.3	70 - 123	40.73	2.19	20	
1,1,2-Trichlor-1,2,2-trifluoroethane	49.81	1.0	50	0	99.6	70 - 130	50.6	1.58	20	
1,1,2-Trichloroethane	42.42	1.0	50	0	84.8	70 - 117	43.22	1.86	20	
1,1-Dichloroethane	47.4	1.0	50	0	94.8	70 - 127	47.83	0.901	20	
1,1-Dichloroethene	47.89	1.0	50	0	95.8	70 - 130	49.62	3.55	20	
1,2,3-Trichlorobenzene	46.71	1.0	50	0	93.4	70 - 130	44.93	3.88	20	
1,2,4-Trichlorobenzene	49.06	1.0	50	0	98.1	70 - 125	48.07	2.05	20	
1,2,4-Trimethylbenzene	50.37	1.0	50	0	101	70 - 125	49.89	0.954	20	
1,2-Dibromoethane	42.83	1.0	50	0	85.7	70 - 124	43.45	1.44	20	
1,2-Dichlorobenzene	53.4	1.0	50	0	107	70 - 115	52.63	1.47	20	
1,2-Dichloroethane	42.81	1.0	50	0	85.6	70 - 127	43.88	2.46	20	
1,2-Dichloropropane	50.76	1.0	50	0	102	70 - 122	52.44	3.26	20	
1,3,5-Trimethylbenzene	50.1	1.0	50	0	100	70 - 126	49.97	0.26	20	
1,3-Dichlorobenzene	53.5	1.0	50	0	107	70 - 119	54.21	1.31	20	
1,4-Dichlorobenzene	51.42	1.0	50	0	103	70 - 114	51.73	0.589	20	
2-Butanone	87.28	2.0	100	0	87.3	70 - 130	89.57	2.59	20	
2-Hexanone	79.89	2.0	100	0	79.9	70 - 130	80.58	0.854	20	
4-Methyl-2-pentanone	77.24	2.0	100	0	77.2	70 - 130	83.42	7.69	20	
Acetone	117.3	2.0	100	17.86	99.4	70 - 130	114.5	2.34	20	
Benzene	45.95	1.0	50	0	91.9	70 - 127	47.37	3.04	20	
Bromodichloromethane	44.36	1.0	50	0	88.7	70 - 124	45.51	2.56	20	
Bromoform	40.44	1.0	50	0	80.9	70 - 129	40.14	0.732	20	
Bromomethane	45.69	1.0	50	0	91.4	70 - 130	47.36	3.59	20	
Carbon disulfide	115.5	2.0	100	0	116	70 - 130	115.7	0.122	20	
Carbon tetrachloride	52.2	1.0	50	0	104	70 - 130	53.6	2.65	20	
Chlorobenzene	43.48	1.0	50	0	87.0	70 - 114	44.44	2.2	20	
Chloroethane	47.38	1.0	50	0	94.8	70 - 130	49.16	3.71	20	
Chloroform	46.6	1.0	50	0	93.2	70 - 125	47.46	1.82	20	
Chloromethane	45.64	1.0	50	0	91.3	70 - 130	46.45	1.74	20	
cis-1,2-Dichloroethene	46.18	1.0	50	0	92.4	70 - 128	47.26	2.31	20	
cis-1,3-Dichloropropene	43.69	1.0	50	0	87.4	70 - 125	46.29	5.78	20	
Cyclohexane	50.83	1.0	50	0	102	70 - 130	52.61	3.43	20	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: **R301258** **Instrument:** **VOA2** **Method:** **SW8260**

MSD Sample ID: **HS17090398-01MSD** Units: **ug/L** Analysis Date: **08-Sep-2017 18:32**
Client ID: **MWGW05-170908** Run ID: **VOA2_301258** SeqNo: **4221728** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Dibromochloromethane	41.85	1.0	50	0	83.7	70 - 124	42.57	1.7	20	
Dichlorodifluoromethane	33.82	1.0	50	0	67.6	70 - 130	33.46	1.06	20	S
Ethylbenzene	44.66	1.0	50	0	89.3	70 - 124	45.58	2.03	20	
Isopropylbenzene	48.24	1.0	50	0	96.5	70 - 130	47.68	1.17	20	
Methyl acetate	44.95	1.0	50	0	89.9	76 - 122	45.02	0.158	20	
Methyl tert-butyl ether	42.53	1.0	50	0	85.1	70 - 130	42.65	0.293	20	
Methylcyclohexane	49.71	1.0	50	0	99.4	61 - 158	51.63	3.78	20	
Methylene chloride	51.64	2.0	50	0	103	70 - 128	52.43	1.52	20	
n-Butylbenzene	59.65	1.0	50	0	119	70 - 130	57.7	3.33	20	
n-Propylbenzene	50.48	1.0	50	0	101	70 - 130	50.97	0.949	20	
sec-Butylbenzene	58.98	1.0	50	0	118	70 - 130	58.96	0.0298	20	
Styrene	43.75	1.0	50	0	87.5	70 - 130	44.3	1.26	20	
tert-Butylbenzene	56.94	1.0	50	0	114	70 - 130	57.53	1.04	20	
Tetrachloroethene	51.07	1.0	50	0	102	70 - 130	52.27	2.31	20	
Toluene	44.42	1.0	50	0	88.8	70 - 123	46.87	5.38	20	
trans-1,2-Dichloroethene	46.66	1.0	50	0	93.3	70 - 130	49.29	5.48	20	
trans-1,3-Dichloropropene	43.53	1.0	50	0	87.1	70 - 121	45.96	5.43	20	
Trichloroethene	45.21	1.0	50	0	90.4	70 - 129	47.15	4.19	20	
Trichlorofluoromethane	49.07	1.0	50	0	98.1	70 - 130	49.69	1.26	20	
Vinyl chloride	46.91	1.0	50	0	93.8	70 - 130	49.12	4.6	20	
Xylenes, Total	132.2	1.0	150	0	88.1	70 - 130	135.6	2.59	20	
Surr: 1,2-Dichloroethane-d4	*51.52*	*1.0*	*50*	*0*	*103*	*70 - 126*	*51.55*	*0.0453*	*20*	
Surr: 4-Bromofluorobenzene	*51*	*1.0*	*50*	*0*	*102*	*81 - 113*	*49.4*	*3.19*	*20*	
Surr: Dibromofluoromethane	*49.94*	*1.0*	*50*	*0*	*99.9*	*77 - 123*	*49.45*	*0.984*	*20*	
Surr: Toluene-d8	*48.1*	*1.0*	*50*	*0*	*96.2*	*82 - 127*	*49.67*	*3.2*	*20*	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: HS17090398

QC BATCH REPORT

Batch ID: R301259 **Instrument: Balance1** **Method: M2540C**

MBLK Sample ID: **WBLK-090817** Units: **mg/L** Analysis Date: **08-Sep-2017 13:30**
Client ID: Run ID: **Balance1_301259** SeqNo: **4221690** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)	U	10.0								

LCS Sample ID: **WLCS-090817** Units: **mg/L** Analysis Date: **08-Sep-2017 13:30**
Client ID: Run ID: **Balance1_301259** SeqNo: **4221691** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)	1062	10.0	1000	0	106	85 - 115				

DUP Sample ID: **HS17090398-01DUP** Units: **mg/L** Analysis Date: **08-Sep-2017 13:30**
Client ID: **MWGW05-170908** Run ID: **Balance1_301259** SeqNo: **4221689** PrepDate: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)	5480	10.0					5360	2.21	5	

The following samples were analyzed in this batch: HS17090398-01

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
WorkOrder: **HS17090398**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	17-027-0	27-Mar-2018
California	2919 2016-2018	31-Jul-2018
Illinois	004112	09-May-2018
Kentucky	123043	30-Apr-2018
Louisiana	03087 2017-2017	30-Jun-2018
North Carolina	624-2017	31-Dec-2017
North Dakota	R193 2017-2017	30-Apr-2018
Texas	T104704231-17-19	30-Apr-2018

ALS Group USA, Corp Date: 10-Sep-17

Client: Pastor, Behling & Wheeler, LLC
Project: USOR Post Harvey GW 5040
Work Order: HS17090398

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS17090398-01	MWGW05-170908	Login	9/8/2017 11:56:40 AM	CL	VOA123
HS17090398-01	MWGW05-170908	Login	9/8/2017 11:56:40 AM	CL	SPA001
HS17090398-01	MWGW05-170908	Login	9/8/2017 11:56:40 AM	CL	SPA001
HS17090398-01	MWGW05-170908	Login	9/8/2017 11:56:40 AM	CL	LF099
HS17090398-01	MWGW05-170908	Login	9/8/2017 11:56:40 AM	CL	5035

ALS Group USA, Corp Date: 10-Sep-17

Sample Receipt Checklist

Client Name:	PBW - Houston	Date/Time Received:	**08-Sep-2017 11:26**
Work Order:	HS17090398	Received by:	**CL**

Checklist completed by:	*Cesar A. Lira* eSignature	8-Sep-2017 Date	Reviewed by: *Dane J. Wacasey* eSignature	8-Sep-2017 Date

Matrices: **Water** Carrier name: **Client**

	Yes	No	Not Present / N/A
Shipping container/cooler in good condition?	☑	☐	☐ Not Present
Custody seals intact on shipping container/cooler?	☐	☐	☑ Not Present
Custody seals intact on sample bottles?	☐	☐	☑ Not Present
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
TX1005 solids received in hermetically sealed vials?	☑	☐	☐ N/A
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	
Temperature(s)/Thermometer(s):	0.6c/1.1c uc/c		IR20
Cooler(s)/Kit(s):	43305		
Date/Time sample(s) sent to storage:	9/8/2017 1200		
Water - VOA vials have zero headspace?	☑	☐	☐ No VOA vials submitted
Water - pH acceptable upon receipt?	☑	☐	☐ N/A
pH adjusted?	☐	☐	☑ N/A
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Cincinnati, OH +1 513 733 5336 | Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600 | Holland, MI +1 616 399 6070

Chain of Custody Fc

Page 1 of 1

COC ID: 157058

HS17090398

Pastor, Behling & Wheeler, LLC
USOR Remedial Investigation 3333-6A

eston, WV
3168

5280

ALS Project Manager:

Customer Information		Project Information	
Purchase Order	~~USOR RI/FS Iteration~~ 5040	Project Name	USOR 3333-6A
Work Order		Project Number	~~3333-6A~~ 5040
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	US Oil Recovery Site PRP Group
Send Report To	Brenda Basile	Invoice Attn	Joe Biss
Address	11231 Richmond Avenue Suite D104	Address	c/o EHS Support LLC PO Box 42
City/State/Zip	Houston, TX 77082	City/State/Zip	Beaver PA 15009-0042
Phone	(832) 916-3691	Phone	
Fax		Fax	
e-Mail Address	brenda.basile@pbwllc.com	e-Mail Address	

A	8260_LL_W (8260 Volatiles)
B	TX1005_W_Low (TX1005 TPH)
C	8270_LOW_W (8270 Semivolatiles)
D	8081_W_Low (8081_LL Pesticides)
E	8151_W (8151 Hebicides)
F	ICP_TW (*GW* 6020/7470 Total Metals)
G	ICP_DISS (*GW* 6020/7470 Dissolved Metals) – Field Filter
H	8260_LL_W (8260 Volatiles - TRIP BLANK)
I	TDS
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MWGW05-170908	9/8/17	0920	WG	1,2	14	X	X	X	X	X	X	X		X		
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Roberta Russell Roberta Russell

Shipment Method: hand deliver

Required Turnaround Time: (Check Box) ☐ Other ☐ STD 10 Wk Days ☐ 5 Wk Days ☒ 2 Wk Days ☐ 24 Hour

Results Due Date:

Relinquished by: Roberta Russell	Date: 9/8/17	Time: 1120	Received by:
Relinquished by:	Date:	Time:	Received by (Laboratory): 9.8.17 1126
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp.
43305	0.6
20	
CECH05	

QC Package: (Check One Box Below)
☐ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other
☒ TRRP Checklist
☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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ATTACHMENT C
DATA VALIDATION REPORT

Data Verification Report

To:	Matt Wickham, P.G.	**Date:**	September 10, 2017
From:	Brenda Basile, Ph.D.	**File:**	USOR Post Harvey DUS.doc
RE:	Review of Post Harvey Soil and Groundwater Samples	**CC:**	Roberta Russell, P.G. Eric Pastor, P.E.

Pastor, Behling & Wheeler, LLC (PBW) reviewed two laboratory reports (HS17090397 and HS17090398) from ALS Environmental (Houston, Texas) providing the analytical results for soil and groundwater samples collected on September 8, 2017 at the U. S. Oil Recovery (USOR) Superfund site. Samples were collected to evaluate the effects of Hurricane Harvey on the USOR Superfund Site. Quality control (QC) data were reviewed as described in the quality assurance project plan (QAPP) and the results of the review are discussed in this memorandum. Table 1 lists the sample identifications cross-referenced to laboratory identifications and the analyses performed for each sample. Data qualified due to exceedances of QC criteria are listed in Table 2.

QUALITY CONTROL RESULTS

PRESERVATION AND HOLDING TIMES

Samples were received at the laboratory at temperatures below 6°C. Sample preparation and analyses were performed within method and QAPP holding times.

BLANKS

Analytes detected in field or laboratory quality control blanks are listed in Table 3. Data are qualified as shown in Tables 2 and 3.

LABORATORY CONTROL SAMPLES

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) (if analyzed) recoveries (%R) outside the QAPP criteria are listed in Table 4. LCS/LCSD precision (as relative percent difference [RPD]) values were within QAPP criteria. Field sample data are qualified as shown in Tables 2 and 4.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Matrix spike/matrix spike duplicate (MS/MSD) recoveries (%R) outside the QAPP criteria are listed in Table 4. MS/MSD precision results (as RPD) outside the QAPP criteria are listed in Table 4. Batch (non-project) data are not evaluated. Data are qualified as shown in Tables 2 and 4. Benzaldehyde and hexachlorocyclopentadiene data for COMP-SB66-170908 were rejected due to MS/MSD recoveries less than 10%.

DUAL COLUMN PRECISION (HERBICIDES AND PESTICIDES)

Data qualified due to dual column precision exceeding 40 percent difference (%D) are listed in Table 2.

SUMMARY

Other than the benzaldehyde and hexachlorocyclopentadiene data for COMP-SB66-170908, analytical data are usable for determining concentrations in soil and groundwater samples collected from the USOR Site for

the post-Hurricane Harvey evaluation. Benzaldehyde and hexachlorocyclopentadiene data for COMP-SB66-170908 were rejected due to MS/MSD recoveries less than 10%.

Table 1 Cross-Reference Field Sample Identifications and Laboratory Identifications

Field Identification	Laboratory Identification	8081	8151	8260	8270	Metals	Comment
COMP-SB66-170908	HS17090397-01	X	X	X	X	X	Pesticide, SVOC, VOC MS/MSD
TB01-170908	HS17090397-02			X			Trip Blank
MWGW05-170908	HS17090398-01	X	X	X	X	X	VOC MS/MSD

Table 2 Qualified Data

Field Identification	Analyte	Qualifier	Reason for Qualification
COMP-SB66-170908	1,1'-Biphenyl	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	1,4-Dioxane	JL	LCS/MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	1-Methylnaphthalene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	2,4,6-Trichlorophenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	2,4-Dichlorophenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	2,4-Dimethylphenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	2,4-Dinitrophenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	4,6-Dinitro-2-methylphenol	JL	LCS recovery below QAPP criteria
COMP-SB66-170908	4-Nitrophenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Acetophenone	JL	LCS recovery below QAPP criteria
COMP-SB66-170908	Acid SVOCs	JL	Surrogate recoveries below QAPP criteria
COMP-SB66-170908	alpha-Chlordane	J	Second column % difference
COMP-SB66-170908	Benzaldehyde	R	MS/MSD recoveries less than 10%
COMP-SB66-170908	Benzo(a)pyrene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Benzo(b)fluoranthene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Benzo(g,h,i)perylene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Benzo(k)fluoranthene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	beta-BHC	J	Second column % difference
COMP-SB66-170908	bis(2-Chloroethoxy)methane	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	bis(2-Chloroethyl)ether	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	bis(2-Chloroisopropyl)ether	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	delta-BHC	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Fluoranthene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	gamma-Chlordane	J	Second column % difference
COMP-SB66-170908	Herbicides	JL	Surrogate recoveries below QAPP criteria
COMP-SB66-170908	Hexachlorobutadiene	JL	LCS/MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Hexachlorocyclopentadiene	R	MS/MSD recoveries less than 10%
COMP-SB66-170908	Hexachloroethane	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Isophorone	JL	LCS/MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Naphthalene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Nitrobenzene	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	n-Nitrosodi-n-propylamine	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Pentachlorophenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Phenol	JL	MS/MSD recoveries below QAPP criteria
COMP-SB66-170908	Pyrene	JL	MS/MSD recoveries below QAPP criteria
MWGW05-170908	1,4-Dioxane	JL	LCS recovery below QAPP criteria
MWGW05-170908	1-Methylnaphthalene	JL	LCS recovery below QAPP criteria
MWGW05-170908	2,4,6-Trichlorophenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	2,4-Dichlorophenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	2,4-Dinitrophenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	2-Chlorophenol	JL	LCS recovery below QAPP criteria

Table 2 Qualified Data

Field Identification	Analyte	Qualifier	Reason for Qualification
MWGW05-170908	2-Methylnaphthalene	JL	LCS recovery below QAPP criteria
MWGW05-170908	2-Methylphenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	2-Nitrophenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	3&4-Methylphenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	4,6-Dinitro-2-methylphenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	4-Bromophenyl phenyl ether	JL	LCS recovery below QAPP criteria
MWGW05-170908	4-Chlorophenyl phenyl ether	JL	LCS recovery below QAPP criteria
MWGW05-170908	4-Nitroaniline	JL	LCS recovery below QAPP criteria
MWGW05-170908	4-Nitrophenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	Acetophenone	JL	LCS recovery below QAPP criteria
MWGW05-170908	Acid SVOCs	JL	Surrogate recoveries below QAPP criteria
MWGW05-170908	Aluminum	U	Analyte detected in quality control blank
MWGW05-170908	Atrazine	JL	LCS recovery below QAPP criteria
MWGW05-170908	Benzaldehyde	JL	LCS recovery below QAPP criteria
MWGW05-170908	bis(2-Chloroethyl)ether	JL	LCS recovery below QAPP criteria
MWGW05-170908	bis(2-Chloroisopropyl)ether	JL	LCS recovery below QAPP criteria
MWGW05-170908	delta-BHC	JL	LCS recovery below QAPP criteria
MWGW05-170908	Dieldrin	J	Second column % difference
MWGW05-170908	gamma-BHC	J	Second column % difference
MWGW05-170908	Heptachlor epoxide	J	Second column % difference
MWGW05-170908	Hexachlorobutadiene	JL	LCS recovery below QAPP criteria
MWGW05-170908	Hexachlorocyclopentadiene	JL	LCS recovery below QAPP criteria
MWGW05-170908	Isophorone	JL	LCS recovery below QAPP criteria
MWGW05-170908	n-Nitrosodi-n-propylamine	JL	LCS recovery below QAPP criteria
MWGW05-170908	Pentachlorophenol	JL	LCS recovery below QAPP criteria
MWGW05-170908	Phenanthrene	JL	LCS recovery below QAPP criteria
MWGW05-170908	Phenol	JL	LCS recovery below QAPP criteria

JH – Data are estimated due to exceedances of one or more quality control criteria; bias likely high
JL – Data are estimated due to exceedances of one or more quality control criteria; bias likely low
J – Data are estimated due to exceedances of one or more quality control criteria
U – Analyte not detected in sample at associated concentration
R – Data are rejected due to failure to meet one or more quality control criteria
Acid SVOCs: 2,3,4,6-Tetrachlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 2,4-dinitrophenol, 2-chlorophenol, 2-methylphenol, 2-nitrophenol, 3&4-methylphenol, 4,6-dinitro-2-methylphenol, 4-chloro-3-methylphenol, 4-nitrophenol, pentachlorophenol, phenol

Table 3 Blank Detections

Identification	Analyte	Concentration	Qualified Concentration
MBLK-119580	Aluminum	0.9011 mg/Kg	4.5 mg/kg
MBLK-119848	Aluminum	0.001817 mg/L	0.00908 mg/L

Table 4 Precision and Recovery Exceedances

Sample	Analyte	Spike Recovery	Spike Duplicate Recovery	Precision	Qualification
COMP-SB66-170908	1,2,3-Trichlorobenzene	74.0	48.2	41.2	None; average > 60%R
COMP-SB66-170908	1,2,4-Trichlorobenzene	78.2	53.5	36.5	None; average > 60%R
COMP-SB66-170908	1,4-Dioxane	23.9	24.0	0.246	JL
COMP-SB66-170908	1-Methylnaphthalene	50.1	58.8	16	JL
COMP-SB66-170908	2,4,6-Tribromophenol	56.3	NA	NA	JL Acid SVOCs
COMP-SB66-170908	2,4,6-Trichlorophenol	50.4	55.5	9.6	JL
COMP-SB66-170908	2,4-Dichlorophenol	46.1	63.3	31.4	JL
COMP-SB66-170908	2,4-Dimethylphenol	49.5	67.2	30.3	JL
COMP-SB66-170908	2,4-Dinitrophenol	13.9	7.25	0	JL
COMP-SB66-170908	2-Chloronaphthalene	58.0	63.4	8.73	None; average > 60%R
COMP-SB66-170908	2-Chlorophenol	39.1	53.9	31.8	JL
COMP-SB66-170908	2-Fluorophenol	48.4	NA	NA	JL Acid SVOCs
COMP-SB66-170908	2-Methylnaphthalene	53.2	60.6	12.5	JL
COMP-SB66-170908	2-Methylphenol	57.3	59.0	2.91	JL
COMP-SB66-170908	2-Nitroaniline	96.7	26.4	114	JL
COMP-SB66-170908	2-Nitrophenol	47.2	34.7	30.5	JL
COMP-SB66-170908	3&4-Methylphenol	56.0	55.5	0.81	JL
COMP-SB66-170908	4,6-Dinitro-2-methylphenol	28.6	2.95	0	JL
COMP-SB66-170908	4-Methyl-2-pentanone	103	164	46.8	None; analyte not detected
COMP-SB66-170908	4-Nitroaniline	65.1	102	44.3	None; analyte not detected
COMP-SB66-170908	4-Nitrophenol	58.0	55.9	3.9	JL
COMP-SB66-170908	Acenaphthene	56.3	63.5	11.8	None; average = 60%R
COMP-SB66-170908	Acenaphthylene	59.0	61.3	3.77	None; average = 60%R
COMP-SB66-170908	Acetone	89.8	156	55	None; analyte not detected
COMP-SB66-170908	Acetophenone	36.1	41.8	14.7	JL
COMP-SB66-170908	Atrazine	57.8	62.5	7.69	None; average = 60%R
COMP-SB66-170908	Benzaldehyde	7.14	5.73	22.1	R
COMP-SB66-170908	Benzo(a)pyrene	44.9	59.9	13.8	JL
COMP-SB66-170908	Benzo(b)fluoranthene	36.0	49.7	11.5	JL
COMP-SB66-170908	Benzo(g,h,i)perylene	50.3	61.9	11.1	JL
COMP-SB66-170908	Benzo(k)fluoranthene	55.5	61.6	6.67	JL
COMP-SB66-170908	bis(2-Chloroethoxy)methane	51.3	49.5	3.51	JL
COMP-SB66-170908	bis(2-Chloroethyl)ether	42.2	48.1	13	JL
COMP-SB66-170908	bis(2-Chloroisopropyl)ether	45.2	48.3	6.62	JL
COMP-SB66-170908	DCAA	39.6	NA	NA	JL Herbicides
COMP-SB66-170908	delta-BHC	54.9	55.5	1.31	JL
COMP-SB66-170908	Dibenzofuran	58.1	62.6	7.35	None; average = 60%R
COMP-SB66-170908	Fluoranthene	53.6	49.0	3.23	JL
COMP-SB66-170908	Hexachlorobutadiene	42.5	46.6	9.13	JL
COMP-SB66-170908	Hexachlorocyclopentadiene	9.07	4.71	63.2	R
COMP-SB66-170908	Hexachloroethane	35.8	31.2	13.9	JL

Table 4 Precision and Recovery Exceedances

Sample	Analyte	Spike Recovery	Spike Duplicate Recovery	Precision	Qualification
COMP-SB66-170908	Isophorone	51.5	50.3	2.49	JL
COMP-SB66-170908	Naphthalene	51.8	54.8	5.42	JL
COMP-SB66-170908	Nitrobenzene	48.2	56.3	15.6	JL
COMP-SB66-170908	Nitrobenzene-d5	53.7	NA	NA	None; only one low
COMP-SB66-170908	n-Nitrosodi-n-propylamine	53.8	57.5	6.6	JL
COMP-SB66-170908	Pentachlorophenol	46.0	39.9	14.3	JL
COMP-SB66-170908	Phenol	50.3	63.9	23.7	JL
COMP-SB66-170908	Pyrene	55.5	59.8	2.96	JL
COMP-SB66-170908	1,1'-Biphenyl	53.7	58.7	8.8	JL
COMP-SB66-170908	3,3'-Dichlorobenzidine	26.6	97.0	114	None; analyte not detected
LCS-119843	1,4-Dioxane	42.1	59.6	34.3	JL
LCS-119843	1-Methylnaphthalene	53.9	61.2	12.8	JL
LCS-119843	2,4,6-Trichlorophenol	52.3	56.9	8.38	JL
LCS-119843	2,4-Dichlorophenol	50.2	68.6	31	JL
LCS-119843	2,4-Dinitrophenol	39.0	36.5	6.58	JL
LCS-119843	2-Chlorophenol	54.3	56.4	3.84	JL
LCS-119843	2-Methylnaphthalene	54.3	61.0	11.6	JL
LCS-119843	2-Methylphenol	59.3	56.0	5.78	JL
LCS-119843	2-Nitrophenol	49.7	58.9	17	JL
LCS-119843	3&4-Methylphenol	62.1	56.6	9.32	JL
LCS-119843	4,6-Dinitro-2-methylphenol	47.3	52.0	9.5	JL
LCS-119843	4-Bromophenyl phenyl ether	55.6	60.8	8.95	JL
LCS-119843	4-Chlorophenyl phenyl ether	56.4	58.1	3.07	JL
LCS-119843	4-Nitroaniline	59.6	49.9	29.8	JL
LCS-119843	4-Nitrophenol	38.1	50.6	28.3	JL
LCS-119843	Acetophenone	45.0	48.5	7.59	JL
LCS-119843	Atrazine	45.8	52.7	13.9	JL
LCS-119843	Benzaldehyde	22.5	23.0	2.44	JL
LCS-119843	Bis(2-Chloroethyl)ether	56.8	53.2	6.61	JL
LCS-119843	Bis(2-Chloroisopropyl)ether	57.0	49.9	13.2	JL
LCS-119843	Hexachlorobutadiene	49.5	61.0	20.8	JL
LCS-119843	Hexachlorocyclopentadiene	44.4	41.5	6.74	JL
LCS-119843	Isophorone	52.8	65.6	21.6	JL
LCS-119843	n-Nitrosodi-n-propylamine	58.8	56.1	4.78	JL
LCS-119843	Pentachlorophenol	34.0	41.1	18.9	JL
LCS-119843	Phenanthrene	57.2	62.4	8.62	JL
LCS-119843	Phenol	55.6	58.5	5.16	JL
LCS-119843	Hexachlorobenzene	58.0	87.8	40.8	None; analyte not detected
LCS-119843	2,4-Dimethylphenol	58.6	74.8	24.2	None; average > 60%R
LCS-119843	2,6-Dinitrotoluene	59.4	70.2	16.6	None; average > 60%R
LCS-119843	4-Chloro-3-methylphenol	55.6	69.3	21.9	None; average > 60%R
LCS-119843	Bis(2-chloroethoxy)methane	58.4	65.4	11.2	None; average > 60%R

Table 4 Precision and Recovery Exceedances

Sample	Analyte	Spike Recovery	Spike Duplicate Recovery	Precision	Qualification
LCS-119843	Caprolactam	58.5	65.8	11.8	None; average > 60%R
LCS-119843	Dibenzofuran	59.2	62.1	4.73	None; average > 60%R
LCS-119843	Fluorene	57.6	63.3	9.32	None; average > 60%R
LCS-119843	Hexachloroethane	63.9	56.3	12.8	None; average > 60%R
LCS-119843	Nitrobenzene	55.4	66.6	10.9	None; average > 60%R
LCS-119843	3,3'-Dichlorobenzidine	82.0	115	33.8	None; analyte not detected
LCS-119860	delta-BHC	52.6	57.9	9.48	JL
LCS-119863	1,4-Dioxane	46.1	NA	NA	JL
LCS-119863	4,6-Dinitro-2-methylphenol	56.8	NA	NA	JL
LCS-119863	Acetophenone	51.8	NA	NA	JL
LCS-119863	Benzaldehyde	29.6	NA	NA	JL
LCS-119863	Hexachlorobutadiene	55.8	NA	NA	JL
LCS-119863	Hexachlorocyclopentadiene	52.5	NA	NA	JL
LCS-119863	Isophorone	56.6	NA	NA	JL
MWGW05-170908	2,4,6-Tribromophenol	46.8	NA	NA	JL Acid SVOCs
MWGW05-170908	2-Fluorobiphenyl	58.6	NA	NA	None; only one low
MWGW05-170908	2-Fluorophenol	58.0	NA	NA	JL Acid SVOCs

JH – Data are estimated due to exceedances of one or more quality control criteria; bias likely high
JL – Data are estimated due to exceedances of one or more quality control criteria; bias likely low
J – Data are estimated due to exceedances of one or more quality control criteria
R – Data are rejected due to failure to meet one or more quality control criteria
BN – Base neutral
NA – Not applicable
SVOC – Semivolatile organic compound