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February 16, 2018

Eric Matzner
Pastor, Behling & Wheeler, LLC
2201 Double Creek Drive
Suite 4004
Round Rock, TX 78664

Work Order: **HS18020543**

Laboratory Results for: **Houston TX-Wood Preserving Works (IDW)**

Dear Eric,

ALS Environmental received 2 sample(s) on Feb 09, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: **Jumoke.Lawal**

Dane J. Wacasey

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

**TRRP Laboratory Data
Package Cover Page**

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits.
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 Other problems or anomalies.
The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

**TRRP Laboratory Data
Package Cover Page**

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory have been identified by the laboratory in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: [NA] This laboratory meets an exception under 30 TAC §25.6 and was last inspected by TCEQ or _____ on (enter date of last inspection). Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.



Dane J. Wacasey

Laboratory Review Checklist: Reportable Data

Laboratory Name: ALS Laboratory Group		LRC Date: 02/15/2018					
Project Name: Houston TX-Wood Preserving Works (IDW)		Laboratory Job Number: HS18020543					
Reviewer Name: Dane Wacasey		Prep Batch Number(s): 125186,125198,125225,125247,R310587,R310589,R310645, R310679,R310861,R310861					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?		X			1
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW-846 Method 5035?			X		
		If required for the project, TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?		X			3
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			4
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSS included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SDL and minimize the matrix interference affects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Program for the analytes, matrices and methods associated with this laboratory data package?	X				5

Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);

NA = Not Applicable;

NR = Not Reviewed;

R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 02/15/2018			
Project Name: Houston TX-Wood Preserving Works (IDW)				Laboratory Job Number: HS18020543			
Reviewer Name: Dane Wacasey				Prep Batch Number(s): 125186,125198,125225,125247,R310587,R310589,R310645, R310679,R310861,R310861			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB)					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?		X			6
S3	O	Mass spectral tuning:					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS):					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports:					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?	X				

Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable);

NA = Not Applicable;

NR = Not Reviewed;

R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Data

Laboratory Name: ALS Laboratory Group		LRC Date: 02/15/2018
Project Name: Houston TX-Wood Preserving Works (IDW)		Laboratory Job Number: HS18020543
Reviewer Name: Dane Wacasey		Prep Batch Number(s): 125186,125198,125225,125247,R310587,R310589,R310645,R310679, R310861,R310861
ER# ⁵	Description	
1	Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier. The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 degrees C.	
2	Batch 125186, Semivolatile Organics Method SW8270, LCS/LCSD RPD was above the RPD limit for Benzidine and Benzo(b)fluoranthene . The individual recoveries were in control.	
3	Batch 125186, Semivolatile Organics Method SW8270, LCS/LCSD were analyzed and reported in lieu of an MS/MSD for this batch.	
4	Batch 125525, Mercury Method SW7470, sample HS18020470-03, MS and MSD are for an unrelated sample. Batch 125247, Metals Method SW6020, sample HS18020448-03, MSD is for an unrelated sample Batch R310861, Volatile Organics Method SW8260, sample HS18020487-01, MS and MSD were performed on unrelated sample. Batch R310861, Volatile Organics Method SW8260, sample HS18020486-01, MS and MSD were performed on unrelated sample.	
5	Reactive Cyanide and Sulfide: TCEQ does not offer accreditation for these compounds, the results are flagged with n.	
6	See Run Log and CCB Exceptions Report.	
<p>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. O = Organic Analyses; I = Inorganic Analyses (and general chemistry, when applicable); NA = Not Applicable; NR = Not Reviewed; R# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</p>		

FORM 13 - ANALYSIS RUN LOG

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543
Start Date: 13-Feb-2018 End Date: 13-Feb-2018

Run ID:HG03_310726
Instrument:HG03
Method:SW7470

Sample No.	D/F	Time	FileID	Analytes
ICV	1	13-Feb-2018 14:22		HG
ICB	1	13-Feb-2018 14:24		HG
CRA	1	13-Feb-2018 14:25		HG
MBLK-125225	1	13-Feb-2018 14:33		HG
LCS-125225	1	13-Feb-2018 14:38		HG
ZZZZZMS	1	13-Feb-2018 14:47		HG
ZZZZZMSD	1	13-Feb-2018 14:49		HG
WG-1620-IDW-W-20180209	1	13-Feb-2018 14:52		HG
CCV 1	1	13-Feb-2018 14:59		HG
CCB 1	1	13-Feb-2018 15:01		HG
CCV 2	1	13-Feb-2018 15:37		HG
CCB 2	1	13-Feb-2018 15:38		HG
CCV 3	1	13-Feb-2018 16:05		HG
CCB 3	1	13-Feb-2018 16:07		HG
CCV 4	1	13-Feb-2018 16:26		HG
CCB 4	1	13-Feb-2018 16:27		HG

CCB EXCEPTIONS REPORT

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

Run ID:HG03_310726
 Instrument:HG03
 Method:SW7470

ICB	Date: 13-Feb-2018 14:24	Seq: 4432566	D/F: 1	Units: ug/L
Analyte		Result	MDL	Report Limit
	Mercury	-0.03	0.03	0.2

CCB 1	Date: 13-Feb-2018 15:01	Seq: 4432578	D/F: 1	Units: ug/L
Analyte		Result	MDL	Report Limit
	Mercury	-0.038	0.03	0.2

CCB 2	Date: 13-Feb-2018 15:38	Seq: 4432838	D/F: 1	Units: ug/L
Analyte		Result	MDL	Report Limit
	Mercury	-0.034	0.03	0.2

CCB 3	Date: 13-Feb-2018 16:07	Seq: 4432850	D/F: 1	Units: ug/L
Analyte		Result	MDL	Report Limit
	Mercury	-0.042	0.03	0.2

CCB 4	Date: 13-Feb-2018 16:27	Seq: 4432856	D/F: 1	Units: ug/L
Analyte		Result	MDL	Report Limit
	Mercury	-0.036	0.03	0.2

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
Work Order: HS18020543

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18020543-01	WG-1620-IDW-W-20180209	Groundwater		09-Feb-2018 10:30	09-Feb-2018 14:00	<input type="checkbox"/>
HS18020543-02	WG-1620-TB06-20180209	Water	ALS-010918-67	09-Feb-2018 00:00	09-Feb-2018 14:00	<input type="checkbox"/>

Client: Pastor, Behling & Wheeler, LLC
 Project: Houston TX-Wood Preserving Works (IDW)
 Sample ID: WG-1620-IDW-W-20180209
 Collection Date: 09-Feb-2018 10:30

ANALYTICAL REPORT

WorkOrder:HS18020543
 Lab ID:HS18020543-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	0.00074	J	0.00020	0.0010	mg/L	1	15-Feb-2018 14:05
Ethylbenzene	0.0015		0.00030	0.0010	mg/L	1	15-Feb-2018 14:05
Toluene		U	0.00020	0.0010	mg/L	1	15-Feb-2018 14:05
Xylenes, Total	0.0020		0.00030	0.0010	mg/L	1	15-Feb-2018 14:05
Surr: 1,2-Dichloroethane-d4	98.0			70-126	%REC	1	15-Feb-2018 14:05
Surr: 4-Bromofluorobenzene	104			81-113	%REC	1	15-Feb-2018 14:05
Surr: Dibromofluoromethane	88.6			77-123	%REC	1	15-Feb-2018 14:05
Surr: Toluene-d8	82.6			82-127	%REC	1	15-Feb-2018 14:05

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

Client: Pastor, Behling & Wheeler, LLC
 Project: Houston TX-Wood Preserving Works (IDW)
 Sample ID: WG-1620-IDW-W-20180209
 Collection Date: 09-Feb-2018 10:30

ANALYTICAL REPORT
 WorkOrder:HS18020543
 Lab ID:HS18020543-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES			Method:SW8270			Prep:SW3510 / 12-Feb-2018	Analyst: GEY
1,2,4-Trichlorobenzene	U		0.000030	0.00020	mg/L	1	15-Feb-2018 16:08
2,4,5-Trichlorophenol	U		0.000058	0.00020	mg/L	1	15-Feb-2018 16:08
2,4,6-Trichlorophenol	U		0.000048	0.00020	mg/L	1	15-Feb-2018 16:08
2,4-Dichlorophenol	U		0.000043	0.00020	mg/L	1	15-Feb-2018 16:08
2,4-Dimethylphenol	U		0.000040	0.00020	mg/L	1	15-Feb-2018 16:08
2,4-Dinitrophenol	U		0.00010	0.0010	mg/L	1	15-Feb-2018 16:08
2,4-Dinitrotoluene	U		0.000059	0.00020	mg/L	1	15-Feb-2018 16:08
2,6-Dinitrotoluene	U		0.000042	0.00020	mg/L	1	15-Feb-2018 16:08
2-Chloronaphthalene	U		0.000021	0.00020	mg/L	1	15-Feb-2018 16:08
2-Chlorophenol	U		0.000036	0.00020	mg/L	1	15-Feb-2018 16:08
2-Methylnaphthalene	U		0.000019	0.00010	mg/L	1	15-Feb-2018 16:08
2-Methylphenol	U		0.000045	0.00020	mg/L	1	15-Feb-2018 16:08
2-Nitroaniline	U		0.000041	0.00020	mg/L	1	15-Feb-2018 16:08
2-Nitrophenol	U		0.000034	0.00020	mg/L	1	15-Feb-2018 16:08
3&4-Methylphenol	U		0.000036	0.00020	mg/L	1	15-Feb-2018 16:08
3,3'-Dichlorobenzidine	U		0.000044	0.00020	mg/L	1	15-Feb-2018 16:08
3-Nitroaniline	U		0.000049	0.00020	mg/L	1	15-Feb-2018 16:08
4,6-Dinitro-2-methylphenol	U		0.000020	0.00020	mg/L	1	15-Feb-2018 16:08
4-Bromophenyl phenyl ether	U		0.000052	0.00020	mg/L	1	15-Feb-2018 16:08
4-Chloro-3-methylphenol	U		0.000032	0.00020	mg/L	1	15-Feb-2018 16:08
4-Chloroaniline	U		0.000039	0.00020	mg/L	1	15-Feb-2018 16:08
4-Chlorophenyl phenyl ether	U		0.000044	0.00020	mg/L	1	15-Feb-2018 16:08
4-Nitroaniline	U		0.000035	0.00020	mg/L	1	15-Feb-2018 16:08
4-Nitrophenol	U		0.000047	0.0010	mg/L	1	15-Feb-2018 16:08
Acenaphthene	0.0049		0.000027	0.00010	mg/L	1	15-Feb-2018 16:08
Acenaphthylene	U		0.000015	0.00010	mg/L	1	15-Feb-2018 16:08
Anthracene	0.00075		0.000014	0.00010	mg/L	1	15-Feb-2018 16:08
Benz(a)anthracene	0.00067		0.000051	0.00010	mg/L	1	15-Feb-2018 16:08
Benzidine	U		0.00010	0.00020	mg/L	1	15-Feb-2018 16:08
Benzo(a)pyrene	0.00025		0.000020	0.00010	mg/L	1	15-Feb-2018 16:08
Benzo(b)fluoranthene	0.00042		0.000023	0.00010	mg/L	1	15-Feb-2018 16:08
Benzo(g,h,i)perylene	0.00012		0.000014	0.00010	mg/L	1	15-Feb-2018 16:08
Benzo(k)fluoranthene	0.00015		0.000019	0.00010	mg/L	1	15-Feb-2018 16:08
Benzyl alcohol	U		0.000055	0.00020	mg/L	1	15-Feb-2018 16:08
Bis(2-chloroethoxy)methane	U		0.000030	0.00020	mg/L	1	15-Feb-2018 16:08
Bis(2-chloroethyl)ether	U		0.000026	0.00020	mg/L	1	15-Feb-2018 16:08
Bis(2-chloroisopropyl)ether	U		0.000071	0.00020	mg/L	1	15-Feb-2018 16:08
Bis(2-ethylhexyl)phthalate	0.0052		0.000037	0.00020	mg/L	1	15-Feb-2018 16:08

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

Client: Pastor, Behling & Wheeler, LLC
 Project: Houston TX-Wood Preserving Works (IDW)
 Sample ID: WG-1620-IDW-W-20180209
 Collection Date: 09-Feb-2018 10:30

ANALYTICAL REPORT
 WorkOrder:HS18020543
 Lab ID:HS18020543-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES		Method:SW8270		Prep:SW3510 / 12-Feb-2018		Analyst: GEY	
Butyl benzyl phthalate	U		0.000019	0.00020	mg/L	1	15-Feb-2018 16:08
Carbazole	U		0.000025	0.00020	mg/L	1	15-Feb-2018 16:08
Chrysene	0.00078		0.000021	0.00010	mg/L	1	15-Feb-2018 16:08
Dibenz(a,h)anthracene	0.000049	J	0.000024	0.00010	mg/L	1	15-Feb-2018 16:08
Dibenzofuran	U		0.000020	0.00010	mg/L	1	15-Feb-2018 16:08
Diethyl phthalate	U		0.000030	0.00020	mg/L	1	15-Feb-2018 16:08
Dimethyl phthalate	U		0.000041	0.00020	mg/L	1	15-Feb-2018 16:08
Di-n-butyl phthalate	U		0.000020	0.00020	mg/L	1	15-Feb-2018 16:08
Di-n-octyl phthalate	U		0.000020	0.00020	mg/L	1	15-Feb-2018 16:08
Fluoranthene	0.0038		0.000010	0.00010	mg/L	1	15-Feb-2018 16:08
Fluorene	0.0012		0.000030	0.00010	mg/L	1	15-Feb-2018 16:08
Hexachlorobenzene	U		0.000044	0.00020	mg/L	1	15-Feb-2018 16:08
Hexachlorobutadiene	U		0.000030	0.00020	mg/L	1	15-Feb-2018 16:08
Hexachlorocyclopentadiene	U		0.000030	0.00020	mg/L	1	15-Feb-2018 16:08
Hexachloroethane	U		0.000060	0.00020	mg/L	1	15-Feb-2018 16:08
Indeno(1,2,3-cd)pyrene	0.00011		0.000022	0.00010	mg/L	1	15-Feb-2018 16:08
Isophorone	U		0.000025	0.00020	mg/L	1	15-Feb-2018 16:08
Naphthalene	U		0.000020	0.00010	mg/L	1	15-Feb-2018 16:08
Nitrobenzene	U		0.000024	0.00020	mg/L	1	15-Feb-2018 16:08
N-Nitrosodimethylamine	U		0.000010	0.00020	mg/L	1	15-Feb-2018 16:08
N-Nitrosodi-n-propylamine	U		0.000032	0.00020	mg/L	1	15-Feb-2018 16:08
N-Nitrosodiphenylamine	U		0.000025	0.00020	mg/L	1	15-Feb-2018 16:08
Pentachlorophenol	U		0.000080	0.00020	mg/L	1	15-Feb-2018 16:08
Phenanthrene	0.0019		0.000021	0.00010	mg/L	1	15-Feb-2018 16:08
Phenol	U		0.000035	0.00020	mg/L	1	15-Feb-2018 16:08
Pyrene	0.0032		0.000019	0.00010	mg/L	1	15-Feb-2018 16:08
<i>Surr: 2,4,6-Tribromophenol</i>	<i>64.8</i>			<i>34-129</i>	<i>%REC</i>	<i>1</i>	<i>15-Feb-2018 16:08</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>49.3</i>			<i>40-125</i>	<i>%REC</i>	<i>1</i>	<i>15-Feb-2018 16:08</i>
<i>Surr: 2-Fluorophenol</i>	<i>51.0</i>			<i>20-120</i>	<i>%REC</i>	<i>1</i>	<i>15-Feb-2018 16:08</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>75.7</i>			<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>15-Feb-2018 16:08</i>
<i>Surr: Nitrobenzene-d5</i>	<i>46.0</i>			<i>41-120</i>	<i>%REC</i>	<i>1</i>	<i>15-Feb-2018 16:08</i>
<i>Surr: Phenol-d6</i>	<i>59.7</i>			<i>20-120</i>	<i>%REC</i>	<i>1</i>	<i>15-Feb-2018 16:08</i>

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

Client: Pastor, Behling & Wheeler, LLC
 Project: Houston TX-Wood Preserving Works (IDW)
 Sample ID: WG-1620-IDW-W-20180209
 Collection Date: 09-Feb-2018 10:30

ANALYTICAL REPORT
 WorkOrder:HS18020543
 Lab ID:HS18020543-01
 Matrix:Groundwater

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL TEXAS TPH BY TX1005		Method:TX1005		Prep:TX1005PR / 12-Feb-2018		Analyst: MBG	
nC6 to nC12	U		0.19	0.49	mg/L	1	12-Feb-2018 21:11
>nC12 to nC28	U		0.19	0.49	mg/L	1	12-Feb-2018 21:11
>nC28 to nC35	U		0.19	0.49	mg/L	1	12-Feb-2018 21:11
Total Petroleum Hydrocarbon	U		0.19	0.49	mg/L	1	12-Feb-2018 21:11
Surr: 2-Fluorobiphenyl	70.6			70-130	%REC	1	12-Feb-2018 21:11
Surr: Trifluoromethyl benzene	80.0			70-130	%REC	1	12-Feb-2018 21:11
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 13-Feb-2018		Analyst: JDE	
Arsenic	0.00602		0.000400	0.00200	mg/L	1	13-Feb-2018 15:52
Barium	0.0613		0.00190	0.00400	mg/L	1	13-Feb-2018 15:52
Cadmium	U		0.000200	0.00200	mg/L	1	13-Feb-2018 15:52
Chromium	0.120		0.000400	0.00400	mg/L	1	13-Feb-2018 15:52
Lead	0.00117	J	0.000600	0.00200	mg/L	1	13-Feb-2018 15:52
Selenium	0.00184	J	0.00110	0.00200	mg/L	1	13-Feb-2018 22:27
Silver	U		0.000200	0.00200	mg/L	1	13-Feb-2018 15:52
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 13-Feb-2018		Analyst: JBA	
Mercury	U		0.0000300	0.000200	mg/L	1	13-Feb-2018 14:52
FLASH POINT BY PENSKEY-MARTENS SW1010A		Method:SW1010				Analyst: KAH	
Ignitability	> 212		70.0	70.0	°F	1	12-Feb-2018 14:00
REACTIVE CYANIDE		Method:SW7.3.3.2		Prep:SW7.3.3.2		Analyst: MZD	
Reactive Cyanide	U	n	100	100	mg/Kg	1	12-Feb-2018 12:01
REACTIVE SULFIDE		Method:SW7.3.4.2				Analyst: MZD	
Reactive Sulfide	U	n	100	100	mg/Kg	1	12-Feb-2018 11:59
PH BY SW9040C		Method:SW9040				Analyst: MZD	
pH	7.73	H	0.100	0.100	pH units	1	12-Feb-2018 16:35
Temp Deg C @pH	25.9	H	0	0	DEG C	1	12-Feb-2018 16:35

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

Client: Pastor, Behling & Wheeler, LLC
 Project: Houston TX-Wood Preserving Works (IDW)
 Sample ID: WG-1620-TB06-20180209
 Collection Date: 09-Feb-2018 00:00

ANALYTICAL REPORT
 WorkOrder:HS18020543
 Lab ID:HS18020543-02
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Benzene	U		0.00020	0.0010	mg/L	1	15-Feb-2018 13:41
Ethylbenzene	U		0.00030	0.0010	mg/L	1	15-Feb-2018 13:41
Toluene	U		0.00020	0.0010	mg/L	1	15-Feb-2018 13:41
Xylenes, Total	U		0.00030	0.0010	mg/L	1	15-Feb-2018 13:41
Surr: 1,2-Dichloroethane-d4	97.5			70-126	%REC	1	15-Feb-2018 13:41
Surr: 4-Bromofluorobenzene	99.9			81-113	%REC	1	15-Feb-2018 13:41
Surr: Dibromofluoromethane	93.2			77-123	%REC	1	15-Feb-2018 13:41
Surr: Toluene-d8	86.2			82-127	%REC	1	15-Feb-2018 13:41

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

WEIGHT LOG

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

Batch ID: 125186 **Method:** LOW-LEVEL SEMIVOLATILES **Prep:** 3510_B_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18020543-01	1	990	1 (mL)	0.00101

Batch ID: 125198 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18020543-01	1	30.78	3 (mL)	0.09747

Batch ID: 125225 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18020543-01	1	10	10 (mL)	1

Batch ID: 125247 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18020543-01	1	10	10 (mL)	1

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 125186	Test Name : LOW-LEVEL SEMIVOLATILES				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30		12 Feb 2018 10:51	15 Feb 2018 16:08	1
Batch ID 125198	Test Name : LOW-LEVEL TEXAS TPH BY TX1005				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30		12 Feb 2018 14:33	12 Feb 2018 21:11	1
Batch ID 125225	Test Name : MERCURY BY SW7470A				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30		13 Feb 2018 08:30	13 Feb 2018 14:52	1
Batch ID 125247	Test Name : ICP-MS METALS BY SW6020A				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30		13 Feb 2018 11:00	13 Feb 2018 22:27	1
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30		13 Feb 2018 11:00	13 Feb 2018 15:52	1
Batch ID R310587	Test Name : REACTIVE SULFIDE				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30			12 Feb 2018 11:59	1
Batch ID R310589	Test Name : REACTIVE CYANIDE				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30			12 Feb 2018 12:01	1
Batch ID R310645	Test Name : FLASH POINT BY PENSKEY-MARTENS SW1010A				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30			12 Feb 2018 14:00	1
Batch ID R310679	Test Name : PH BY SW9040C				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30			12 Feb 2018 16:35	1
Batch ID R310861	Test Name : LOW LEVEL VOLATILES BY SW8260C				Matrix: Water	
HS18020543-02	WG-1620-TB06-20180209	09 Feb 2018 00:00			15 Feb 2018 13:41	1
Batch ID R310861	Test Name : LOW LEVEL VOLATILES BY SW8260C				Matrix: Groundwater	
HS18020543-01	WG-1620-IDW-W-20180209	09 Feb 2018 10:30			15 Feb 2018 14:05	1

WorkOrder: HS18020543
 InstrumentID: FID-10
 Test Code: TX1005_W_Low
 Test Number: TX1005
 Test Name: Low-level Texas TPH by TX1005

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	nC6 to nC12	TPH-1005-1	0.25	0.24	0.20	0.50
A	>nC12 to nC28	TPH-1005-2	0.25	0.25	0.20	0.50
A	>nC28 to nC35	TPH-1005-4	0.25	0.24	0.20	0.50
A	Total Petroleum Hydrocarbon	TPH	0.25	0.49	0.20	0.50
S	2-Fluorobiphenyl	321-60-8	0	0	0	0
S	Trifluoromethyl benzene	98-08-8	0	0	0	0

WorkOrder: HS18020543
 InstrumentID: HG03
 Test Code: HG_W
 Test Number: SW7470
 Test Name: Mercury by SW7470A

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Mercury	7439-97-6	0.0000500	0.000190	0.0000300	0.000200

WorkOrder: HS18020543
 InstrumentID: ICPMS05
 Test Code: ICP_TW
 Test Number: SW6020
 Test Name: ICP-MS Metals by SW6020A

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Arsenic	7440-38-2	0.00100	0.000987	0.000400	0.00200
A	Barium	7440-39-3	0.00250	0.00245	0.00190	0.00400
A	Cadmium	7440-43-9	0.00100	0.000925	0.000200	0.00200
A	Chromium	7440-47-3	0.00100	0.000779	0.000400	0.00400
A	Lead	7439-92-1	0.00100	0.00104	0.000600	0.00200
A	Selenium	7782-49-2	0.00200	0.000853	0.00110	0.00200
A	Silver	7440-22-4	0.00100	0.000904	0.000200	0.00200

WorkOrder: HS18020543
 InstrumentID: SV-7
 Test Code: 8270_LOW_W
 Test Number: SW8270
 Test Name: Low-Level Semivolatiles

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous

Units: mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	1,2,4-Trichlorobenzene	120-82-1	0.00010	0.000082	0.000030	0.00020
A	2,4,5-Trichlorophenol	95-95-4	0.00010	0.000077	0.000057	0.00020
A	2,4,6-Trichlorophenol	88-06-2	0.00010	0.000082	0.000048	0.00020
A	2,4-Dichlorophenol	120-83-2	0.00010	0.000078	0.000043	0.00020
A	2,4-Dimethylphenol	105-67-9	0.00010	0.000010	0.000040	0.00020
A	2,4-Dinitrophenol	51-28-5	0.00010	0.000067	0.00010	0.0010
A	2,4-Dinitrotoluene	121-14-2	0.00010	0.000069	0.000058	0.00020
A	2,6-Dinitrotoluene	606-20-2	0.00010	0.00011	0.000042	0.00020
A	2-Chloronaphthalene	91-58-7	0.00010	0.000074	0.000021	0.00020
A	2-Chlorophenol	95-57-8	0.00010	0.000069	0.000036	0.00020
A	2-Methylnaphthalene	91-57-6	0.00010	0.000077	0.000019	0.00010
A	2-Methylphenol	95-48-7	0.00010	0.000071	0.000045	0.00020
A	2-Nitroaniline	88-74-4	0.00010	0.000074	0.000041	0.00020
A	2-Nitrophenol	88-75-5	0.00010	0.000074	0.000034	0.00020
A	3&4-Methylphenol	3/4-CRESOL	0.00010	0.000070	0.000036	0.00020
A	3,3'-Dichlorobenzidine	91-94-1	0.00010	0.000084	0.000044	0.00020
A	3-Nitroaniline	99-09-2	0.00010	0.000064	0.000049	0.00020
A	4,6-Dinitro-2-methylphenol	534-52-1	0.00010	0.000059	0.000020	0.00020
A	4-Bromophenyl phenyl ether	101-55-3	0.00010	0.000080	0.000051	0.00020
A	4-Chloro-3-methylphenol	59-50-7	0.00010	0.000066	0.000032	0.00020
A	4-Chloroaniline	106-47-8	0.00010	0.000065	0.000039	0.00020
A	4-Chlorophenyl phenyl ether	7005-72-3	0.00010	0.000075	0.000044	0.00020
A	4-Nitroaniline	100-01-6	0.00010	0.000069	0.000035	0.00020
A	4-Nitrophenol	100-02-7	0.00010	0.000045	0.000047	0.0010
A	Acenaphthene	83-32-9	0.000050	0.000043	0.000027	0.00010
A	Acenaphthylene	208-96-8	0.000050	0.000048	0.000015	0.00010
A	Anthracene	120-12-7	0.000050	0.000041	0.000014	0.00010
A	Benz(a)anthracene	56-55-3	0.000050	0.000053	0.000050	0.00010
A	Benzidine	92-87-5	0.00010	0.000022	0.00010	0.00020
A	Benzo(a)pyrene	50-32-8	0.000050	0.000046	0.000020	0.00010
A	Benzo(b)fluoranthene	205-99-2	0.000050	0.000051	0.000023	0.00010
A	Benzo(g,h,i)perylene	191-24-2	0.000050	0.000055	0.000014	0.00010
A	Benzo(k)fluoranthene	207-08-9	0.000050	0.000042	0.000019	0.00010
A	Benzyl alcohol	100-51-6	0.00010	0.00010	0.000054	0.00020
A	Bis(2-chloroethoxy)methane	111-91-1	0.00010	0.000071	0.000030	0.00020
A	Bis(2-chloroethyl)ether	111-44-4	0.00010	0.000070	0.000026	0.00020
A	Bis(2-chloroisopropyl)ether	108-60-1	0.00010	0.000072	0.000070	0.00020
A	Bis(2-ethylhexyl)phthalate	117-81-7	0.00010	0.00013	0.000037	0.00020
A	Butyl benzyl phthalate	85-68-7	0.00010	0.000094	0.000019	0.00020
A	Carbazole	86-74-8	0.00010	0.000079	0.000025	0.00020
A	Chrysene	218-01-9	0.000050	0.000048	0.000021	0.00010

WorkOrder: HS18020543
 InstrumentID: SV-7
 Test Code: 8270_LOW_W
 Test Number: SW8270
 Test Name: Low-Level Semivolatiles

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Dibenz(a,h)anthracene	53-70-3	0.000050	0.000053	0.000024	0.00010
A	Dibenzofuran	132-64-9	0.00010	0.000072	0.000020	0.00010
A	Diethyl phthalate	84-66-2	0.00010	0.000078	0.000030	0.00020
A	Dimethyl phthalate	131-11-3	0.00010	0.000071	0.000041	0.00020
A	Di-n-butyl phthalate	84-74-2	0.00010	0.000092	0.000020	0.00020
A	Di-n-octyl phthalate	117-84-0	0.00010	0.000088	0.000020	0.00020
A	Fluoranthene	206-44-0	0.000050	0.000049	0.000010	0.00010
A	Fluorene	86-73-7	0.000050	0.000041	0.000030	0.00010
A	Hexachlorobenzene	118-74-1	0.00010	0.000081	0.000044	0.00020
A	Hexachlorobutadiene	87-68-3	0.00010	0.000081	0.000030	0.00020
A	Hexachlorocyclopentadiene	77-47-4	0.00010	0.000083	0.000030	0.00020
A	Hexachloroethane	67-72-1	0.00010	0.000074	0.000059	0.00020
A	Indeno(1,2,3-cd)pyrene	193-39-5	0.00010	0.000096	0.000022	0.00010
A	Isophorone	78-59-1	0.00010	0.000080	0.000025	0.00020
A	Naphthalene	91-20-3	0.00010	0.000083	0.000020	0.00010
A	Nitrobenzene	98-95-3	0.00010	0.00011	0.000024	0.00020
A	N-Nitrosodimethylamine	62-75-9	0.00010	0.000068	0.00010	0.00020
A	N-Nitrosodi-n-propylamine	621-64-7	0.00010	0.000071	0.000032	0.00020
A	N-Nitrosodiphenylamine	86-30-6	0.00010	0.000072	0.000025	0.00020
A	Pentachlorophenol	87-86-5	0.00010	0.000098	0.000079	0.00020
A	Phenanthrene	85-01-8	0.000050	0.000045	0.000021	0.00010
A	Phenol	108-95-2	0.00010	0.000071	0.000035	0.00020
A	Pyrene	129-00-0	0.000050	0.000048	0.000019	0.00010
S	2,4,6-Tribromophenol	118-79-6	0	0	0	0.00020
S	2-Fluorobiphenyl	321-60-8	0	0	0	0.00020
S	2-Fluorophenol	367-12-4	0	0	0	0.00020
S	4-Terphenyl-d14	1718-51-0	0	0	0	0.00020
S	Nitrobenzene-d5	4165-60-0	0	0	0	0.00020
S	Phenol-d6	13127-88-3	0	0	0	0.00020

WorkOrder: HS18020543
 InstrumentID: VOA4
 Test Code: 8260_LL_W
 Test Number: SW8260
 Test Name: Low Level Volatiles by SW8260C

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous

Units: mg/L

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Benzene	71-43-2	0.00050	0.00066	0.00020	0.0010
A	Ethylbenzene	100-41-4	0.00050	0.00051	0.00030	0.0010
A	Toluene	108-88-3	0.00050	0.00060	0.00020	0.0010
A	Xylenes, Total	1330-20-7	0.00050	0.00052	0.00030	0.0010
S	1,2-Dichloroethane-d4	17060-07-0	0	0	0	0.0010
S	4-Bromofluorobenzene	460-00-4	0	0	0	0.0010
S	Dibromofluoromethane	1868-53-7	0	0	0	0.0010
S	Toluene-d8	2037-26-5	0	0	0	0.0010

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125198	Instrument: FID-10	Method: TX1005
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MBLK	Sample ID: MBLK-125198	Units: mg/L	Analysis Date: 12-Feb-2018 19:44							
Client ID:	Run ID: FID-10_310686	SeqNo: 4431561	PrepDate: 12-Feb-2018 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	1.877	0	2.5	0	75.1	70 - 130				
Surr: Trifluoromethyl benzene	2.078	0	2.5	0	83.1	70 - 130				

LCS	Sample ID: LCS-125198	Units: mg/L	Analysis Date: 12-Feb-2018 20:13							
Client ID:	Run ID: FID-10_310686	SeqNo: 4431562	PrepDate: 12-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	24.72	0.50	25	0	98.9	75 - 125				
>nC12 to nC28	24.74	0.50	25	0	99.0	75 - 125				
Surr: 2-Fluorobiphenyl	2.065	0	2.5	0	82.6	70 - 130				
Surr: Trifluoromethyl benzene	2.423	0	2.5	0	96.9	70 - 130				

LCSD	Sample ID: LCSD-125198	Units: mg/L	Analysis Date: 12-Feb-2018 20:42							
Client ID:	Run ID: FID-10_310686	SeqNo: 4431563	PrepDate: 12-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	22.31	0.50	25	0	89.2	75 - 125	24.72	10.3	20	
>nC12 to nC28	23.18	0.50	25	0	92.7	75 - 125	24.74	6.53	20	
Surr: 2-Fluorobiphenyl	1.855	0	2.5	0	74.2	70 - 130	2.065	10.7	20	
Surr: Trifluoromethyl benzene	2.203	0	2.5	0	88.1	70 - 130	2.423	9.51	20	

MS	Sample ID: HS18020543-01MS	Units: mg/L	Analysis Date: 12-Feb-2018 21:40							
Client ID: WG-1620-IDW-W-20180209	Run ID: FID-10_310686	SeqNo: 4431565	PrepDate: 12-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	22.57	0.48	24.15	0	93.5	75 - 125				
>nC12 to nC28	23.98	0.48	24.15	0	99.3	75 - 125				
Surr: 2-Fluorobiphenyl	2.035	0	2.415	0	84.3	70 - 130				
Surr: Trifluoromethyl benzene	2.177	0	2.415	0	90.2	70 - 130				

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125198 **Instrument:** FID-10 **Method:** TX1005

MSD Sample ID: **HS18020543-01MSD** Units: **mg/L** Analysis Date: **12-Feb-2018 22:09**
Client ID: **WG-1620-IDW-W-20180209** **Run ID:** **FID-10_310686** **SeqNo:** **4431566** **PrepDate:** **12-Feb-2018** **DF:** **1**
Analyte **Result** **MQL** **SPK Val** **SPK Ref Value** **%REC** **Control Limit** **RPD Ref Value** **%RPD** **RPD Limit** **Qual**

nC6 to nC12	23.17	0.49	24.28	0	95.4	75 - 125	22.57	2.65	20
>nC12 to nC28	23.42	0.49	24.28	0	96.5	75 - 125	23.98	2.37	20
<i>Surr: 2-Fluorobiphenyl</i>	1.712	0	2.428	0	70.5	70 - 130	2.035	17.3	20
<i>Surr: Trifluoromethyl benzene</i>	2.091	0	2.428	0	86.1	70 - 130	2.177	4.03	20

The following samples were analyzed in this batch: HS18020543-01

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125225	Instrument: HG03	Method: SW7470
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MBLK	Sample ID: MBLK-125225	Units: mg/L	Analysis Date: 13-Feb-2018 14:33							
Client ID:	Run ID: HG03_310726	SeqNo: 4432568	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury U 0.000200

LCS	Sample ID: LCS-125225	Units: mg/L	Analysis Date: 13-Feb-2018 14:38							
Client ID:	Run ID: HG03_310726	SeqNo: 4432569	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.00513 0.000200 0.005 0 103 80 - 120

MS	Sample ID: HS18020470-03MS	Units: mg/L	Analysis Date: 13-Feb-2018 14:47							
Client ID:	Run ID: HG03_310726	SeqNo: 4432573	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.000615 0.000200 0.005 -0.000065 13.6 75 - 125 S

MSD	Sample ID: HS18020470-03MSD	Units: mg/L	Analysis Date: 13-Feb-2018 14:49							
Client ID:	Run ID: HG03_310726	SeqNo: 4432574	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Mercury 0.000705 0.000200 0.005 -0.000065 15.4 75 - 125 0.000615 13.6 20 S

The following samples were analyzed in this batch: HS18020543-01

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125247	Instrument: ICPMS05	Method: SW6020
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MBLK	Sample ID: MBLK-125247	Units: mg/L	Analysis Date: 13-Feb-2018 15:16							
Client ID:	Run ID: ICPMS05_310672	SeqNo: 4432718	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Arsenic	U	0.00200								
Barium	U	0.00400								
Cadmium	U	0.00200								
Chromium	U	0.00400								
Lead	U	0.00200								
Selenium	U	0.00200								
Silver	U	0.00200								

LCS	Sample ID: LCS-125247	Units: mg/L	Analysis Date: 13-Feb-2018 15:18							
Client ID:	Run ID: ICPMS05_310672	SeqNo: 4432719	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Arsenic	0.04581	0.00200	0.05	0	91.6	80 - 120				
Barium	0.04282	0.00400	0.05	0	85.6	80 - 120				
Cadmium	0.04545	0.00200	0.05	0	90.9	80 - 120				
Chromium	0.04573	0.00400	0.05	0	91.5	80 - 120				
Lead	0.05084	0.00200	0.05	0	102	80 - 120				
Selenium	0.04106	0.00200	0.05	0	82.1	80 - 120				
Silver	0.04285	0.00200	0.05	0	85.7	80 - 120				

MS	Sample ID: HS18020448-03MS	Units: mg/L	Analysis Date: 13-Feb-2018 15:38							
Client ID:	Run ID: ICPMS05_310672	SeqNo: 4432729	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Arsenic	0.04867	0.00200	0.05	0.001504	94.3	80 - 120				
Barium	0.4058	0.00400	0.05	0.3624	86.8	80 - 120				O
Cadmium	0.04449	0.00200	0.05	0	89.0	80 - 120				
Chromium	0.05119	0.00400	0.05	0.005825	90.7	80 - 120				
Lead	0.04544	0.00200	0.05	0.000665	89.5	80 - 120				
Silver	0.04046	0.00200	0.05	0	80.9	80 - 120				

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125247	Instrument: ICPMS05	Method: SW6020								
MS	Sample ID: HS18020448-03MS	Units: mg/L	Analysis Date: 13-Feb-2018 22:21							
Client ID:	Run ID: ICPMS05_310750	SeqNo: 4433359	PrepDate: 13-Feb-2018 DF: 2							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Selenium	0.05125	0.00400	0.05	0.000495	102	80 - 120
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MSD	Sample ID: HS18020448-03MSD	Units: mg/L	Analysis Date: 13-Feb-2018 15:40							
Client ID:	Run ID: ICPMS05_310672	SeqNo: 4432730	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Arsenic	0.05046	0.00200	0.05	0.001504	97.9	80 - 120	0.04867	3.61	20	
Barium	0.4007	0.00400	0.05	0.3624	76.7	80 - 120	0.4058	1.25	20	SO
Cadmium	0.0441	0.00200	0.05	0	88.2	80 - 120	0.04449	0.883	20	
Chromium	0.05186	0.00400	0.05	0.005825	92.1	80 - 120	0.05119	1.3	20	
Lead	0.04623	0.00200	0.05	0.000665	91.1	80 - 120	0.04544	1.74	20	
Silver	0.04186	0.00200	0.05	0	83.7	80 - 120	0.04046	3.4	20	

MSD	Sample ID: HS18020448-03MSD	Units: mg/L	Analysis Date: 13-Feb-2018 22:23							
Client ID:	Run ID: ICPMS05_310750	SeqNo: 4433360	PrepDate: 13-Feb-2018 DF: 2							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Selenium	0.04843	0.00400	0.05	0.000495	95.9	80 - 120	0.05125	5.67	20
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PDS	Sample ID: HS18020448-03PDS	Units: mg/L	Analysis Date: 13-Feb-2018 15:42							
Client ID:	Run ID: ICPMS05_310672	SeqNo: 4432731	PrepDate: 13-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Arsenic	0.09437	0.00200	0.1	0.001504	92.9	75 - 125
Barium	0.4514	0.00400	0.1	0.3624	89.0	75 - 125
Cadmium	0.08481	0.00200	0.1	0.000153	84.7	75 - 125
Chromium	0.09401	0.00400	0.1	0.005825	88.2	75 - 125
Lead	0.08709	0.00200	0.1	0.000665	86.4	75 - 125
Silver	0.08005	0.00200	0.1	0.000087	80.0	75 - 125

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125247	Instrument: ICPMS05	Method: SW6020
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SD	Sample ID: HS18020448-03SD	Units: mg/L	Analysis Date: 13-Feb-2018 15:36						
Client ID:	Run ID: ICPMS05_310672	SeqNo: 4432728	PrepDate: 13-Feb-2018 DF: 5						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Arsenic	U	0.0100					0.001504	0	10
Barium	0.3696	0.0200					0.3624	1.98	10
Cadmium	U	0.0100					0.000153	0	10
Chromium	0.006632	0.0200					0.005825	0	10 J
Lead	U	0.0100					0.000665	0	10
Silver	U	0.0100					0.000087	0	10

SD	Sample ID: HS18020448-03SD	Units: mg/L	Analysis Date: 13-Feb-2018 22:19						
Client ID:	Run ID: ICPMS05_310750	SeqNo: 4433358	PrepDate: 13-Feb-2018 DF: 10						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Selenium	U	0.0200					0.000495	0	10

The following samples were analyzed in this batch: HS18020543-01

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186	Instrument: SV-7	Method: SW8270								
MBLK	Sample ID: MBLK-125186	Units: ug/L	Analysis Date: 15-Feb-2018 13:34							
Client ID:	Run ID: SV-7_310874	SeqNo: 4436336	PrepDate: 12-Feb-2018 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

1,2,4-Trichlorobenzene	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-Chloroaniline	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								
Anthracene	U	0.10								
Benz(a)anthracene	U	0.10								
Benzidine	U	0.20								
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								
Benzyl alcohol	U	0.20								

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7		Method: SW8270						
MBLK	Sample ID: MBLK-125186	Units: ug/L			Analysis Date: 15-Feb-2018 13:34					
Client ID:	Run ID: SV-7_310874	SeqNo: 4436336		PrepDate: 12-Feb-2018		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
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								
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-Nitrosodimethylamine	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								
Surr: 2,4,6-Tribromophenol	4.368	0.20	5	0	87.4	34 - 129				
Surr: 2-Fluorobiphenyl	3.924	0.20	5	0	78.5	40 - 125				
Surr: 2-Fluorophenol	3.515	0.20	5	0	70.3	20 - 120				
Surr: 4-Terphenyl-d14	4.589	0.20	5	0	91.8	40 - 135				

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186	Instrument: SV-7	Method: SW8270
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MBLK	Sample ID: MBLK-125186	Units: ug/L	Analysis Date: 15-Feb-2018 13:34						
Client ID:	Run ID: SV-7_310874	SeqNo: 4436336	PrepDate: 12-Feb-2018 DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
<i>Surr: Nitrobenzene-d5</i>	3.486	0.20	5	0	69.7	41 - 120			
<i>Surr: Phenol-d6</i>	3.855	0.20	5	0	77.1	20 - 120			

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7			Method: SW8270					
LCS	Sample ID: LCS-125186	Units: ug/L			Analysis Date: 15-Feb-2018 13:53					
Client ID:	Run ID: SV-7_310874	SeqNo: 4436337			PrepDate: 12-Feb-2018		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	3.533	0.20	5	0	70.7	45 - 120				
2,4,5-Trichlorophenol	3.945	0.20	5	0	78.9	46 - 120				
2,4,6-Trichlorophenol	3.64	0.20	5	0	72.8	42 - 120				
2,4-Dichlorophenol	3.835	0.20	5	0	76.7	49 - 120				
2,4-Dimethylphenol	3.325	0.20	5	0	66.5	35 - 120				
2,4-Dinitrophenol	3.337	1.0	5	0	66.7	15 - 120				
2,4-Dinitrotoluene	4.135	0.20	5	0	82.7	50 - 122				
2,6-Dinitrotoluene	4.082	0.20	5	0	81.6	50 - 120				
2-Chloronaphthalene	5.066	0.20	5	0	101	50 - 120				
2-Chlorophenol	3.542	0.20	5	0	70.8	40 - 120				
2-Methylnaphthalene	3.698	0.10	5	0	74.0	50 - 120				
2-Methylphenol	3.669	0.20	5	0	73.4	45 - 120				
2-Nitroaniline	4.776	0.20	5	0	95.5	28 - 139				
2-Nitrophenol	3.517	0.20	5	0	70.3	40 - 120				
3&4-Methylphenol	3.613	0.20	5	0	72.3	35 - 120				
3,3'-Dichlorobenzidine	4.065	0.20	5	0	81.3	15 - 120				
3-Nitroaniline	3.658	0.20	5	0	73.2	30 - 120				
4,6-Dinitro-2-methylphenol	4.163	0.20	5	0	83.3	25 - 121				
4-Bromophenyl phenyl ether	3.73	0.20	5	0	74.6	45 - 120				
4-Chloro-3-methylphenol	3.957	0.20	5	0	79.1	47 - 120				
4-Chloroaniline	3.538	0.20	5	0	70.8	20 - 120				
4-Chlorophenyl phenyl ether	3.762	0.20	5	0	75.2	50 - 120				
4-Nitroaniline	3.888	0.20	5	0	77.8	30 - 133				
4-Nitrophenol	3.978	1.0	5	0	79.6	30 - 130				
Acenaphthene	3.374	0.10	5	0	67.5	45 - 120				
Acenaphthylene	3.696	0.10	5	0	73.9	47 - 120				
Anthracene	3.924	0.10	5	0	78.5	45 - 120				
Benz(a)anthracene	4.007	0.10	5	0	80.1	40 - 120				
Benzidine	1.116	0.20	5	0	22.3	10 - 120				
Benzo(a)pyrene	4.364	0.10	5	0	87.3	45 - 120				
Benzo(b)fluoranthene	4.592	0.10	5	0	91.8	50 - 120				
Benzo(g,h,i)perylene	3.962	0.10	5	0	79.2	42 - 127				
Benzo(k)fluoranthene	3.62	0.10	5	0	72.4	45 - 127				
Benzyl alcohol	3.776	0.20	5	0	75.5	35 - 122				

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7		Method: SW8270						
LCS	Sample ID: LCS-125186	Units: ug/L			Analysis Date: 15-Feb-2018 13:53					
Client ID:	Run ID: SV-7_310874	SeqNo: 4436337		PrepDate: 12-Feb-2018		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	3.638	0.20	5	0	72.8	45 - 120				
Bis(2-chloroethyl)ether	3.572	0.20	5	0	71.4	37 - 121				
Bis(2-chloroisopropyl)ether	3.457	0.20	5	0	69.1	40 - 120				
Bis(2-ethylhexyl)phthalate	4.287	0.20	5	0	85.7	40 - 139				
Butyl benzyl phthalate	4.378	0.20	5	0	87.6	47 - 123				
Carbazole	3.947	0.20	5	0	78.9	42 - 128				
Chrysene	4.084	0.10	5	0	81.7	43 - 120				
Dibenz(a,h)anthracene	4.264	0.10	5	0	85.3	45 - 125				
Dibenzofuran	3.776	0.10	5	0	75.5	50 - 120				
Diethyl phthalate	3.966	0.20	5	0	79.3	41 - 120				
Dimethyl phthalate	3.916	0.20	5	0	78.3	40 - 122				
Di-n-butyl phthalate	4.252	0.20	5	0	85.0	45 - 123				
Di-n-octyl phthalate	4.555	0.20	5	0	91.1	45 - 129				
Fluoranthene	4.13	0.10	5	0	82.6	45 - 125				
Fluorene	3.781	0.10	5	0	75.6	49 - 120				
Hexachlorobenzene	3.737	0.20	5	0	74.7	48 - 120				
Hexachlorobutadiene	3.484	0.20	5	0	69.7	40 - 120				
Hexachlorocyclopentadiene	2.911	0.20	5	0	58.2	34 - 136				
Hexachloroethane	3.485	0.20	5	0	69.7	40 - 120				
Indeno(1,2,3-cd)pyrene	5.251	0.10	5	0	105	41 - 128				
Isophorone	3.66	0.20	5	0	73.2	40 - 121				
Naphthalene	3.544	0.10	5	0	70.9	45 - 120				
Nitrobenzene	3.462	0.20	5	0	69.2	44 - 120				
N-Nitrosodimethylamine	3.364	0.20	5	0	67.3	30 - 121				
N-Nitrosodi-n-propylamine	3.731	0.20	5	0	74.6	40 - 120				
N-Nitrosodiphenylamine	3.947	0.20	5	0	78.9	40 - 125				
Pentachlorophenol	3.787	0.20	5	0	75.7	19 - 121				
Phenanthrene	3.792	0.10	5	0	75.8	45 - 121				
Phenol	3.505	0.20	5	0	70.1	20 - 124				
Pyrene	4.154	0.10	5	0	83.1	40 - 130				
Surr: 2,4,6-Tribromophenol	4.062	0.20	5	0	81.2	34 - 129				
Surr: 2-Fluorobiphenyl	3.733	0.20	5	0	74.7	40 - 125				
Surr: 2-Fluorophenol	3.256	0.20	5	0	65.1	20 - 120				
Surr: 4-Terphenyl-d14	4.26	0.20	5	0	85.2	40 - 135				

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7		Method: SW8270						
LCS	Sample ID: LCS-125186	Units: ug/L			Analysis Date: 15-Feb-2018 13:53					
Client ID:	Run ID: SV-7_310874	SeqNo: 4436337		PrepDate: 12-Feb-2018		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Surr: Nitrobenzene-d5	3.363	0.20	5	0	67.3	41 - 120				
Surr: Phenol-d6	3.653	0.20	5	0	73.1	20 - 120				

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7			Method: SW8270					
LCSD		Sample ID: LCSD-125186			Units: ug/L		Analysis Date: 15-Feb-2018 14:13			
Client ID:		Run ID: SV-7_310874			SeqNo: 4436338		PrepDate: 12-Feb-2018		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	3.695	0.20	5	0	73.9	45 - 120	3.533	4.49	20	
2,4,5-Trichlorophenol	3.862	0.20	5	0	77.2	46 - 120	3.945	2.14	20	
2,4,6-Trichlorophenol	4.342	0.20	5	0	86.8	42 - 120	3.64	17.6	20	
2,4-Dichlorophenol	4.051	0.20	5	0	81.0	49 - 120	3.835	5.48	20	
2,4-Dimethylphenol	3.595	0.20	5	0	71.9	35 - 120	3.325	7.79	20	
2,4-Dinitrophenol	3.753	1.0	5	0	75.1	15 - 120	3.337	11.7	50	
2,4-Dinitrotoluene	4.446	0.20	5	0	88.9	50 - 122	4.135	7.25	20	
2,6-Dinitrotoluene	4.399	0.20	5	0	88.0	50 - 120	4.082	7.47	20	
2-Chloronaphthalene	4.722	0.20	5	0	94.4	50 - 120	5.066	7.04	20	
2-Chlorophenol	3.79	0.20	5	0	75.8	40 - 120	3.542	6.78	20	
2-Methylnaphthalene	3.827	0.10	5	0	76.5	50 - 120	3.698	3.43	20	
2-Methylphenol	3.827	0.20	5	0	76.5	45 - 120	3.669	4.22	20	
2-Nitroaniline	5.092	0.20	5	0	102	28 - 139	4.776	6.41	20	
2-Nitrophenol	3.744	0.20	5	0	74.9	40 - 120	3.517	6.26	20	
3&4-Methylphenol	4.033	0.20	5	0	80.7	35 - 120	3.613	11	20	
3,3'-Dichlorobenzidine	4.422	0.20	5	0	88.4	15 - 120	4.065	8.42	20	
3-Nitroaniline	4.131	0.20	5	0	82.6	30 - 120	3.658	12.1	20	
4,6-Dinitro-2-methylphenol	4.475	0.20	5	0	89.5	25 - 121	4.163	7.21	30	
4-Bromophenyl phenyl ether	4.09	0.20	5	0	81.8	45 - 120	3.73	9.23	20	
4-Chloro-3-methylphenol	4.167	0.20	5	0	83.3	47 - 120	3.957	5.17	20	
4-Chloroaniline	3.718	0.20	5	0	74.4	20 - 120	3.538	4.96	20	
4-Chlorophenyl phenyl ether	4.035	0.20	5	0	80.7	50 - 120	3.762	7.01	20	
4-Nitroaniline	4.267	0.20	5	0	85.3	30 - 133	3.888	9.28	20	
4-Nitrophenol	3.454	1.0	5	0	69.1	30 - 130	3.978	14.1	20	
Acenaphthene	3.754	0.10	5	0	75.1	45 - 120	3.374	10.7	20	
Acenaphthylene	3.941	0.10	5	0	78.8	47 - 120	3.696	6.4	20	
Anthracene	4.173	0.10	5	0	83.5	45 - 120	3.924	6.16	20	
Benz(a)anthracene	4.853	0.10	5	0	97.1	40 - 120	4.007	19.1	20	
Benzidine	1.567	0.20	5	0	31.3	10 - 120	1.116	33.6	30	R
Benzo(a)pyrene	4.618	0.10	5	0	92.4	45 - 120	4.364	5.64	20	
Benzo(b)fluoranthene	5.813	0.10	5	0	116	50 - 120	4.592	23.5	20	R
Benzo(g,h,i)perylene	4.259	0.10	5	0	85.2	42 - 127	3.962	7.23	20	
Benzo(k)fluoranthene	3.185	0.10	5	0	63.7	45 - 127	3.62	12.8	20	
Benzyl alcohol	4.151	0.20	5	0	83.0	35 - 122	3.776	9.46	20	

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7			Method: SW8270					
LCSD		Sample ID: LCSD-125186			Units: ug/L		Analysis Date: 15-Feb-2018 14:13			
Client ID:		Run ID: SV-7_310874			SeqNo: 4436338		PrepDate: 12-Feb-2018		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	3.863	0.20	5	0	77.3	45 - 120	3.638	5.99	20	
Bis(2-chloroethyl)ether	3.901	0.20	5	0	78.0	37 - 121	3.572	8.8	20	
Bis(2-chloroisopropyl)ether	3.7	0.20	5	0	74.0	40 - 120	3.457	6.78	20	
Bis(2-ethylhexyl)phthalate	4.473	0.20	5	0	89.5	40 - 139	4.287	4.25	20	
Butyl benzyl phthalate	4.418	0.20	5	0	88.4	47 - 123	4.378	0.908	20	
Carbazole	4.257	0.20	5	0	85.1	42 - 128	3.947	7.55	20	
Chrysene	3.642	0.10	5	0	72.8	43 - 120	4.084	11.4	20	
Dibenz(a,h)anthracene	4.685	0.10	5	0	93.7	45 - 125	4.264	9.42	20	
Dibenzofuran	4.028	0.10	5	0	80.6	50 - 120	3.776	6.45	20	
Diethyl phthalate	4.282	0.20	5	0	85.6	41 - 120	3.966	7.65	20	
Dimethyl phthalate	4.217	0.20	5	0	84.3	40 - 122	3.916	7.41	20	
Di-n-butyl phthalate	4.398	0.20	5	0	88.0	45 - 123	4.252	3.36	20	
Di-n-octyl phthalate	4.914	0.20	5	0	98.3	45 - 129	4.555	7.58	20	
Fluoranthene	4.247	0.10	5	0	84.9	45 - 125	4.13	2.78	20	
Fluorene	4.062	0.10	5	0	81.2	49 - 120	3.781	7.16	20	
Hexachlorobenzene	4.025	0.20	5	0	80.5	48 - 120	3.737	7.42	20	
Hexachlorobutadiene	3.739	0.20	5	0	74.8	40 - 120	3.484	7.07	20	
Hexachlorocyclopentadiene	3.213	0.20	5	0	64.3	34 - 136	2.911	9.85	20	
Hexachloroethane	3.75	0.20	5	0	75.0	40 - 120	3.485	7.33	20	
Indeno(1,2,3-cd)pyrene	5.686	0.10	5	0	114	41 - 128	5.251	7.96	20	
Isophorone	3.858	0.20	5	0	77.2	40 - 121	3.66	5.27	20	
Naphthalene	3.688	0.10	5	0	73.8	45 - 120	3.544	3.97	20	
Nitrobenzene	3.626	0.20	5	0	72.5	44 - 120	3.462	4.64	20	
N-Nitrosodimethylamine	3.593	0.20	5	0	71.9	30 - 121	3.364	6.6	20	
N-Nitrosodi-n-propylamine	4.127	0.20	5	0	82.5	40 - 120	3.731	10.1	20	
N-Nitrosodiphenylamine	4.14	0.20	5	0	82.8	40 - 125	3.947	4.77	20	
Pentachlorophenol	4.003	0.20	5	0	80.1	19 - 121	3.787	5.53	20	
Phenanthrene	4.155	0.10	5	0	83.1	45 - 121	3.792	9.14	20	
Phenol	3.97	0.20	5	0	79.4	20 - 124	3.505	12.4	20	
Pyrene	4.169	0.10	5	0	83.4	40 - 130	4.154	0.365	20	
Surr: 2,4,6-Tribromophenol	4.366	0.20	5	0	87.3	34 - 129	4.062	7.22	20	
Surr: 2-Fluorobiphenyl	4.068	0.20	5	0	81.4	40 - 125	3.733	8.59	20	
Surr: 2-Fluorophenol	3.524	0.20	5	0	70.5	20 - 120	3.256	7.9	20	
Surr: 4-Terphenyl-d14	4.418	0.20	5	0	88.4	40 - 135	4.26	3.64	20	

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: 125186		Instrument: SV-7		Method: SW8270						
LCSD	Sample ID: LCSD-125186	Units: ug/L			Analysis Date: 15-Feb-2018 14:13					
Client ID:	Run ID: SV-7_310874	SeqNo: 4436338		PrepDate: 12-Feb-2018		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

<i>Surr: Nitrobenzene-d5</i>	3.536	0.20	5	0	70.7	41 - 120	3.363	5	20
<i>Surr: Phenol-d6</i>	3.984	0.20	5	0	79.7	20 - 120	3.653	8.68	20

The following samples were analyzed in this batch:

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310861		Instrument: VOA4		Method: SW8260					
MBLK	Sample ID: VBLKW-180215	Units: ug/L			Analysis Date: 15-Feb-2018 12:03				
Client ID:	Run ID: VOA4_310861	SeqNo: 4436185		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	1.0							
Ethylbenzene	U	1.0							
Toluene	U	1.0							
Xylenes, Total	U	1.0							
Surr: 1,2-Dichloroethane-d4	47.14	1.0	50	0	94.3	70 - 123			
Surr: 4-Bromofluorobenzene	49.99	1.0	50	0	100.0	82 - 115			
Surr: Dibromofluoromethane	44.95	1.0	50	0	89.9	73 - 126			
Surr: Toluene-d8	43	1.0	50	0	86.0	81 - 120			

LCS	Sample ID: VLCSW-180215	Units: ug/L			Analysis Date: 15-Feb-2018 11:14				
Client ID:	Run ID: VOA4_310861	SeqNo: 4436183		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	50.13	1.0	50	0	100	74 - 120			
Ethylbenzene	42.88	1.0	50	0	85.8	77 - 117			
Toluene	42.31	1.0	50	0	84.6	77 - 118			
Xylenes, Total	139	1.0	150	0	92.7	75 - 122			
Surr: 1,2-Dichloroethane-d4	49.4	1.0	50	0	98.8	70 - 130			
Surr: 4-Bromofluorobenzene	55.06	1.0	50	0	110	82 - 115			
Surr: Dibromofluoromethane	52.96	1.0	50	0	106	73 - 126			
Surr: Toluene-d8	41.14	1.0	50	0	82.3	81 - 120			

MS	Sample ID: HS18020487-01MS	Units: ug/L			Analysis Date: 15-Feb-2018 16:07				
Client ID:	Run ID: VOA4_310861	SeqNo: 4438074		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	56.7	1.0	50	0	113	70 - 127			
Ethylbenzene	46.23	1.0	50	0	92.5	70 - 124			
Toluene	45.02	1.0	50	0	90.0	70 - 123			
Xylenes, Total	149	1.0	150	0	99.3	70 - 130			
Surr: 1,2-Dichloroethane-d4	49.61	1.0	50	0	99.2	70 - 126			
Surr: 4-Bromofluorobenzene	56.34	1.0	50	0	113	81 - 113			
Surr: Dibromofluoromethane	52.66	1.0	50	0	105	77 - 123			
Surr: Toluene-d8	40.26	1.0	50	0	80.5	82 - 127			

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310861		Instrument: VOA4		Method: SW8260						
MS	Sample ID: HS18020486-01MS	Units: ug/L			Analysis Date: 15-Feb-2018 15:18					
Client ID:	Run ID: VOA4_310861	SeqNo: 4438072		PrepDate:			DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	57.54	1.0	50	0	115	70 - 127				
Ethylbenzene	46.94	1.0	50	0	93.9	70 - 124				
Toluene	46.1	1.0	50	0	92.2	70 - 123				
Xylenes, Total	149.5	1.0	150	0	99.7	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>49.81</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.6</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>57.18</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>114</i>	<i>81 - 113</i>				S
<i>Surr: Dibromofluoromethane</i>	<i>52.29</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>105</i>	<i>77 - 123</i>				
<i>Surr: Toluene-d8</i>	<i>40.26</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>80.5</i>	<i>82 - 127</i>				S

MSD	Sample ID: HS18020487-01MSD	Units: ug/L			Analysis Date: 15-Feb-2018 16:32					
Client ID:	Run ID: VOA4_310861	SeqNo: 4438075		PrepDate:			DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	56.09	1.0	50	0	112	70 - 127	56.7	1.07	20	
Ethylbenzene	44.71	1.0	50	0	89.4	70 - 124	46.23	3.34	20	
Toluene	42.91	1.0	50	0	85.8	70 - 123	45.02	4.79	20	
Xylenes, Total	143.5	1.0	150	0	95.6	70 - 130	149	3.79	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>48.69</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>97.4</i>	<i>70 - 126</i>	<i>49.61</i>	<i>1.87</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>57.3</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>115</i>	<i>81 - 113</i>	<i>56.34</i>	<i>1.69</i>	<i>20</i>	S
<i>Surr: Dibromofluoromethane</i>	<i>51.92</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>77 - 123</i>	<i>52.66</i>	<i>1.4</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>39.51</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>79.0</i>	<i>82 - 127</i>	<i>40.26</i>	<i>1.88</i>	<i>20</i>	S

MSD	Sample ID: HS18020486-01MSD	Units: ug/L			Analysis Date: 15-Feb-2018 15:43					
Client ID:	Run ID: VOA4_310861	SeqNo: 4438073		PrepDate:			DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	54.43	1.0	50	0	109	70 - 127	57.54	5.54	20	
Ethylbenzene	44.91	1.0	50	0	89.8	70 - 124	46.94	4.42	20	
Toluene	43.78	1.0	50	0	87.6	70 - 123	46.1	5.15	20	
Xylenes, Total	144.4	1.0	150	0	96.2	70 - 130	149.5	3.49	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>48.56</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>97.1</i>	<i>70 - 126</i>	<i>49.81</i>	<i>2.54</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>56.2</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>112</i>	<i>81 - 113</i>	<i>57.18</i>	<i>1.74</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>51.43</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>77 - 123</i>	<i>52.29</i>	<i>1.68</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>39.79</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>79.6</i>	<i>82 - 127</i>	<i>40.26</i>	<i>1.2</i>	<i>20</i>	S

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310861 **Instrument:** VOA4 **Method:** SW8260

The following samples were analyzed in this batch: HS18020543-01 HS18020543-02

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310587	Instrument: WetChem_HS	Method: SW7.3.4.2
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MBLK	Sample ID: MBLK-310587	Units: mg/Kg	Analysis Date: 12-Feb-2018 11:59							
Client ID:	Run ID: WetChem_HS_310587	SeqNo: 4429195	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Sulfide U 100

LCS	Sample ID: LCS-310587	Units: mg/Kg	Analysis Date: 12-Feb-2018 11:59							
Client ID:	Run ID: WetChem_HS_310587	SeqNo: 4429196	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Sulfide 68 10.0 100 0 68.0 20 - 120

MS	Sample ID: HS18020358-02MS	Units: mg/Kg	Analysis Date: 12-Feb-2018 11:59							
Client ID:	Run ID: WetChem_HS_310587	SeqNo: 4429197	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Sulfide 60 10.0 100 0 60.0 20 - 120

The following samples were analyzed in this batch: HS18020543-01

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310589	Instrument: UV-2450	Method: SW7.3.3.2
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MBLK	Sample ID: MBLK-310589	Units: mg/Kg	Analysis Date: 12-Feb-2018 12:01							
Client ID:	Run ID: UV-2450_310589	SeqNo: 4429211	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Cyanide U 100

LCS	Sample ID: LCS-310589	Units: mg/Kg	Analysis Date: 12-Feb-2018 12:01							
Client ID:	Run ID: UV-2450_310589	SeqNo: 4429212	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Cyanide 0.63 10.0 10 0 6.30 5 - 100 J

MS	Sample ID: HS18020358-02MS	Units: mg/Kg	Analysis Date: 12-Feb-2018 12:01							
Client ID:	Run ID: UV-2450_310589	SeqNo: 4429213	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Cyanide 0.63 10.0 10 -0.02 6.50 5 - 100 J

The following samples were analyzed in this batch: HS18020543-01

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310645	Instrument: WetChem_HS	Method: SW1010
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LCS	Sample ID: LCS-R310645	Units: °F	Analysis Date: 12-Feb-2018 14:00							
Client ID:	Run ID: WetChem_HS_310645	SeqNo: 4430352	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Ignitability	83.6	70.0	81	0	103	95 - 105
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DUP	Sample ID: HS18020452-01DUP	Units: °F	Analysis Date: 12-Feb-2018 14:00							
Client ID:	Run ID: WetChem_HS_310645	SeqNo: 4430353	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Ignitability	131.6	70.0					129.6	1.53	20
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The following samples were analyzed in this batch:

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

Client: Pastor, Behling & Wheeler, LLC
Project: Houston TX-Wood Preserving Works (IDW)
WorkOrder: HS18020543

QC BATCH REPORT

Batch ID: R310679		Instrument: WetChem_HS		Method: SM4500H+ B						
DUP	Sample ID: HS18020613-03DUP	Units: pH Units		Analysis Date: 12-Feb-2018 16:35						
Client ID:	Run ID: WetChem_HS_310679	SeqNo: 4431461		PrepDate:		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.48	0.100					7.45	0.402	10	
Temp Deg C @pH	22	0					21	4.65	10	

The following samples were analyzed in this batch:

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

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**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 Quantitation 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 Dakota	R193 2017-2017	30-Apr-2018
Oklahoma	2017-088	31-Aug-2018
Texas	T104704231-17-19	30-Apr-2018
North Carolina	624-2018	31-Dec-2018

Sample Receipt Checklist

Client Name: PBW
 Work Order: HS18020543

Date/Time Received: **09-Feb-2018 14:00**
 Received by: **PMG**

Checklist completed by: Paresh M. Giga 9-Feb-2018 Reviewed by: Dane J. Wacasey 13-Feb-2018
 eSignature Date eSignature Date

Matrices: **Groundwater/Water** Carrier name: **Client**

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

Temperature(s)/Thermometer(s): 2.7c/2.2c U/c IR11
 Cooler(s)/Kit(s): 25070
 Date/Time sample(s) sent to storage: 2/9/18 18:45

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

Login Notes: Received unpreserved containers for RCI. Reactive cyanide and Reactive sulfide are logged for analysis. COC lists as Totals.

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 Form

Page 1 of 1

COC ID: 175999

Houston, TX
+1 281 530 5650
Middletown, PA
+1 717 944 5541



South Charleston, WV
+1 304 356 3168
York, PA
+1 717 505 5280

Customer Information		Project Information		ALS Project Manager:		ALS Work Order #:	
Purchase Order	UPRR / Kevin Peterburs	Project Name	Houston TX-Wood Preserving (IDW)	A	8260_LL_W / 8260_S (5635947 BTEX (IDW))		
Work Order		Project Number	1620-06-Rev0 92688	B	TX1005_W_Low/TX1005_S_REV3 (5643233 TPH TX1005)		
Company Name	Pastor, Behling & Wheeler, LLC	Bill To Company	Union Pacific Railroad- A/P	C	8270_LOW_W/8270_LOW_S (5632532 SVOC (IDW))		
Send Report To	Eric Matzner	Invoice Attn	Accounts Payable	D	1311_METALS_HS (5640672 5652643 TCLP RCRA 8)-IDWS		
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750	E	ICP_TW (5652643 RCRA 8 Metals (IDWWW))		
				F	CN_TW_9014 (5652638 Cyanide - RCI)-IDWWW		
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha NE 681790750	G	SULFD_4500S F (5652638 Sulfide - RCI)-IDWWW		
Phone	(512) 671-3434	Phone		H	pH_W_9040C (5635957 pH - RCI)-IDWWW		
Fax	(512) 671-3446	Fax		I	IGN_W (5652637 Ignitability - RCI)-IDWWW		
e-Mail Address	eric.matzner@pbwllc.com	e-Mail Address		J			

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WG-1620-IDW-W-20180209	2-9-18	1030	GW		10	X	X	X	X	X	X	X	X	X		
2	WG-1620-TB06-20180209					2	X										
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

HS18020543
 Pastor, Behling & Wheeler, LLC
 Houston TX-Wood Preserving Works (IDW)

Sampler(s) Please Print & Sign <i>JOHN BRAYTON</i>		Shipment Method HAND DELIVERED		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> Other 72hr <input type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour		Results Due Date:	
Relinquished by: <i>[Signature]</i>	Date: 2-9-18	Time: 1400	Received by: <i>[Signature]</i>	Notes: UPRR Houston MWPW			
Relinquished by:	Date:	Time:	Received by (Laboratory): 2-9-18: 1400	Cooler ID: 25070	Cooler Temp: 27.0	QC Package: (Check One Box Below)	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	<input checked="" type="checkbox"/> Level II Std GC <input type="checkbox"/> TRRP Checklist <input type="checkbox"/> Level III Std GC/Raw Data <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> Level IV SW846/CLP <input type="checkbox"/> Other			

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 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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