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August 22, 2019

Eric Matzner  
Golder Associates Inc.  
2201 Double Creek Drive  
Suite 4004  
Round Rock, TX 78664

Work Order: **HS19080556**

Laboratory Results for: **Houston TX-Wood Preserving Works**

Dear Eric,

ALS Environmental received 6 sample(s) on Aug 10, 2019 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

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**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

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**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.

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**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

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**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: 08/22/2019			
Project Name: Houston TX-Wood Preserving Works				Laboratory Job Number: HS19080556			
Reviewer Name: Dane Wacasey				Prep Batch Number(s): 144039,144041,R344125,R344268,R344271,R344272,R344324			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER <sup>5</sup>
<b>R1</b>	OI	<b>Chain-of-custody (C-O-C)</b>					
		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				
<b>R2</b>	OI	<b>Sample and quality control (QC) identification</b>					
		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				
<b>R3</b>	OI	<b>Test reports</b>					
		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		
<b>R4</b>	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
<b>R5</b>	OI	<b>Test reports/summary forms for blank samples</b>					
		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				
<b>R6</b>	OI	<b>Laboratory control samples (LCS):</b>					
		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				
		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				
<b>R7</b>	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?		X			2
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
<b>R8</b>	OI	<b>Analytical duplicate data</b>					
		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				
<b>R9</b>	OI	<b>Method quantitation limits (MQLs):</b>					
		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				
<b>R10</b>	OI	<b>Other problems/anomalies</b>					
		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 effects 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				3

Laboratory Review Checklist: Supporting Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 08/22/2019			
Project Name: Houston TX-Wood Preserving Works				Laboratory Job Number: HS19080556			
Reviewer Name: Dane Wacasey				Prep Batch Number(s): 144039,144041,R344125,R344268,R344271,R344272,R344324			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
<b>S1</b>	OI	<b>Initial calibration (ICAL)</b>					
		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				
<b>S2</b>	OI	<b>Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB)</b>					
		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		
<b>S3</b>	O	<b>Mass spectral tuning:</b>					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
<b>S4</b>	O	<b>Internal standards (IS):</b>					
		Were IS area counts and retention times within the method-required QC limits?	X				
<b>S5</b>	OI	<b>Raw data</b> (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				
<b>S6</b>	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
<b>S7</b>	O	<b>Tentatively identified compounds (TICs):</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
<b>S8</b>	I	<b>Interference Check Sample (ICS) results:</b>					
		Were percent recoveries within method QC limits?			X		
<b>S9</b>	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
<b>S10</b>	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
<b>S11</b>	OI	<b>Proficiency test reports:</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
<b>S12</b>	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
<b>S13</b>	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
<b>S14</b>	OI	<b>Demonstration of analyst competency (DOC)</b>					
		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				
<b>S15</b>	OI	<b>Verification/validation documentation for methods</b> (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				
<b>S16</b>	OI	<b>Laboratory standard operating procedures (SOPs):</b>					
		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 Reports**

Laboratory Name: ALS Laboratory Group	LRC Date: 08/22/2019
Project Name: Houston TX-Wood Preserving Works	Laboratory Job Number: HS19080556
Reviewer Name: Dane Wacasey	Prep Batch Number(s): 144039,144041,R344125,R344268,R344271,R344272,R344324

ER# <sup>5</sup>	Description
1	<p>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.</p> <p>Please note that all pH results are already normalized to a temperature of 25 degrees C.</p>
2	Batch 144041, Semivolatile Organics Method SW8270, LCS/LCSD were analyzed and reported in lieu of an MS/MSD for this batch.
3	<p>Reactive Cyanide by Method SW7.3.3.2; TCEQ does not offer accreditation for Reactive Cyanide, the results are flagged with n.</p> <p>Reactive Sulfide by Method SW7.3.4.2; TCEQ does not offer accreditation for Reactive Sulfide, the results are flagged with n.</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).

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**Work Order:** HS19080556

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19080556-01	W-1620-RO-20190810	Water		10-Aug-2019 10:50	10-Aug-2019 14:55	<input type="checkbox"/>
HS19080556-02	W-1620-RO-LibertyRd-20190810	Water		10-Aug-2019 11:15	10-Aug-2019 14:55	<input checked="" type="checkbox"/>
HS19080556-03	W-1620-RO-Ditch-20190810	Water		10-Aug-2019 11:15	10-Aug-2019 14:55	<input type="checkbox"/>
HS19080556-04	WQ-1620-TB-20190810	Water	CG 080519 -68	10-Aug-2019 10:30	10-Aug-2019 14:55	<input type="checkbox"/>
HS19080556-05	S-1620-Sheen-20190810	Solid		10-Aug-2019 12:00	10-Aug-2019 14:55	<input checked="" type="checkbox"/>
HS19080556-06	W-1620-Fractank-20190810	Water		10-Aug-2019 14:00	10-Aug-2019 14:55	<input type="checkbox"/>

Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works  
 Sample ID: W-1620-RO-20190810  
 Collection Date: 10-Aug-2019 10:50

**ANALYTICAL REPORT**

WorkOrder:HS19080556  
 Lab ID:HS19080556-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: PC			
Benzene	U		0.00020	0.0010	mg/L	1	12-Aug-2019 19:15
Ethylbenzene	U		0.00030	0.0010	mg/L	1	12-Aug-2019 19:15
Toluene	U		0.00020	0.0010	mg/L	1	12-Aug-2019 19:15
Xylenes, Total	U		0.00030	0.0010	mg/L	1	12-Aug-2019 19:15
Surr: 1,2-Dichloroethane-d4	89.5			70-126	%REC	1	12-Aug-2019 19:15
Surr: 4-Bromofluorobenzene	103			81-113	%REC	1	12-Aug-2019 19:15
Surr: Dibromofluoromethane	93.0			77-123	%REC	1	12-Aug-2019 19:15
Surr: Toluene-d8	99.6			82-127	%REC	1	12-Aug-2019 19:15
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>		<b>Method:SW8270</b>		Prep:SW3510 / 12-Aug-2019		Analyst: GEY	
<b>Acenaphthene</b>	<b>0.00010</b>		<b>0.000027</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
Acenaphthylene	U		0.000015	0.00010	mg/L	1	12-Aug-2019 18:46
<b>Anthracene</b>	<b>0.000016</b>	J	<b>0.000014</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
Benz(a)anthracene	U		0.000051	0.00010	mg/L	1	12-Aug-2019 18:46
Benzo(a)pyrene	U		0.000020	0.00010	mg/L	1	12-Aug-2019 18:46
Benzo(b)fluoranthene	U		0.000023	0.00010	mg/L	1	12-Aug-2019 18:46
Benzo(g,h,i)perylene	U		0.000014	0.00010	mg/L	1	12-Aug-2019 18:46
Benzo(k)fluoranthene	U		0.000019	0.00010	mg/L	1	12-Aug-2019 18:46
Chrysene	U		0.000021	0.00010	mg/L	1	12-Aug-2019 18:46
Dibenz(a,h)anthracene	U		0.000024	0.00010	mg/L	1	12-Aug-2019 18:46
<b>Dibenzofuran</b>	<b>0.000055</b>	J	<b>0.000020</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
<b>Fluoranthene</b>	<b>0.000046</b>	J	<b>0.000010</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
<b>Fluorene</b>	<b>0.000085</b>	J	<b>0.000030</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
Indeno(1,2,3-cd)pyrene	U		0.000022	0.00010	mg/L	1	12-Aug-2019 18:46
<b>Naphthalene</b>	<b>0.000080</b>	J	<b>0.000020</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
<b>Phenanthrene</b>	<b>0.00013</b>		<b>0.000021</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
<b>Pyrene</b>	<b>0.000027</b>	J	<b>0.000019</b>	<b>0.00010</b>	<b>mg/L</b>	1	12-Aug-2019 18:46
Surr: 2-Fluorobiphenyl	84.2			40-125	%REC	1	12-Aug-2019 18:46
Surr: 4-Terphenyl-d14	85.8			40-135	%REC	1	12-Aug-2019 18:46
Surr: Nitrobenzene-d5	74.6			41-120	%REC	1	12-Aug-2019 18:46
<b>LOW-LEVEL TEXAS TPH BY TX1005</b>		<b>Method:TX1005</b>		Prep:TX1005PR / 12-Aug-2019		Analyst: MBG	
nC6 to nC12	U		0.20	0.50	mg/L	1	14-Aug-2019 00:53
>nC12 to nC28	U		0.20	0.50	mg/L	1	14-Aug-2019 00:53
>nC28 to nC35	U		0.20	0.50	mg/L	1	14-Aug-2019 00:53
Total Petroleum Hydrocarbon	U		0.20	0.50	mg/L	1	14-Aug-2019 00:53
Surr: 2-Fluorobiphenyl	106			70-130	%REC	1	14-Aug-2019 00:53
Surr: Trifluoromethyl benzene	113			70-130	%REC	1	14-Aug-2019 00:53

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



Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works  
 Sample ID: W-1620-RO-Ditch-20190810  
 Collection Date: 10-Aug-2019 11:15

**ANALYTICAL REPORT**  
 WorkOrder:HS19080556  
 Lab ID:HS19080556-03  
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>			<b>Method:SW8260</b>			Analyst: PC	
Benzene	U		0.00020	0.0010	mg/L	1	12-Aug-2019 19:39
Ethylbenzene	U		0.00030	0.0010	mg/L	1	12-Aug-2019 19:39
Toluene	U		0.00020	0.0010	mg/L	1	12-Aug-2019 19:39
Xylenes, Total	U		0.00030	0.0010	mg/L	1	12-Aug-2019 19:39
Surr: 1,2-Dichloroethane-d4	90.4			70-126	%REC	1	12-Aug-2019 19:39
Surr: 4-Bromofluorobenzene	100			81-113	%REC	1	12-Aug-2019 19:39
Surr: Dibromofluoromethane	93.5			77-123	%REC	1	12-Aug-2019 19:39
Surr: Toluene-d8	102			82-127	%REC	1	12-Aug-2019 19:39
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>			<b>Method:SW8270</b>			Prep:SW3510 / 12-Aug-2019 Analyst: GEY	
Acenaphthene	0.00033		0.000027	0.00010	mg/L	1	12-Aug-2019 19:05
Acenaphthylene	U		0.000015	0.00010	mg/L	1	12-Aug-2019 19:05
Anthracene	0.000088	J	0.000014	0.00010	mg/L	1	12-Aug-2019 19:05
Benz(a)anthracene	0.00011		0.000050	0.00010	mg/L	1	12-Aug-2019 19:05
Benzo(a)pyrene	0.000068	J	0.000020	0.00010	mg/L	1	12-Aug-2019 19:05
Benzo(b)fluoranthene	0.00014		0.000023	0.00010	mg/L	1	12-Aug-2019 19:05
Benzo(g,h,i)perylene	0.000066	J	0.000014	0.00010	mg/L	1	12-Aug-2019 19:05
Benzo(k)fluoranthene	0.000074	J	0.000019	0.00010	mg/L	1	12-Aug-2019 19:05
Chrysene	0.00023		0.000021	0.00010	mg/L	1	12-Aug-2019 19:05
Dibenz(a,h)anthracene	0.000034	J	0.000024	0.00010	mg/L	1	12-Aug-2019 19:05
Dibenzofuran	0.00014		0.000020	0.00010	mg/L	1	12-Aug-2019 19:05
Fluoranthene	0.00090		0.000010	0.00010	mg/L	1	12-Aug-2019 19:05
Fluorene	0.00021		0.000030	0.00010	mg/L	1	12-Aug-2019 19:05
Indeno(1,2,3-cd)pyrene	0.000040	J	0.000022	0.00010	mg/L	1	12-Aug-2019 19:05
Naphthalene	0.00019		0.000020	0.00010	mg/L	1	12-Aug-2019 19:05
Phenanthrene	0.00021		0.000021	0.00010	mg/L	1	12-Aug-2019 19:05
Pyrene	0.00053		0.000019	0.00010	mg/L	1	12-Aug-2019 19:05
Surr: 2-Fluorobiphenyl	78.6			40-125	%REC	1	12-Aug-2019 19:05
Surr: 4-Terphenyl-d14	85.9			40-135	%REC	1	12-Aug-2019 19:05
Surr: Nitrobenzene-d5	71.7			41-120	%REC	1	12-Aug-2019 19:05
<b>LOW-LEVEL TEXAS TPH BY TX1005</b>			<b>Method:TX1005</b>			Prep:TX1005PR / 12-Aug-2019 Analyst: MBG	
nC6 to nC12	U		0.20	0.50	mg/L	1	14-Aug-2019 01:22
>nC12 to nC28	U		0.20	0.50	mg/L	1	14-Aug-2019 01:22
>nC28 to nC35	U		0.20	0.50	mg/L	1	14-Aug-2019 01:22
Total Petroleum Hydrocarbon	U		0.20	0.50	mg/L	1	14-Aug-2019 01:22
Surr: 2-Fluorobiphenyl	95.9			70-130	%REC	1	14-Aug-2019 01:22
Surr: Trifluoromethyl benzene	103			70-130	%REC	1	14-Aug-2019 01:22

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

Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works  
 Sample ID: WQ-1620-TB-20190810  
 Collection Date: 10-Aug-2019 10:30

**ANALYTICAL REPORT**  
 WorkOrder:HS19080556  
 Lab ID:HS19080556-04  
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: PC			
Benzene	U		0.00020	0.0010	mg/L	1	12-Aug-2019 18:51
Ethylbenzene	U		0.00030	0.0010	mg/L	1	12-Aug-2019 18:51
Toluene	U		0.00020	0.0010	mg/L	1	12-Aug-2019 18:51
Xylenes, Total	U		0.00030	0.0010	mg/L	1	12-Aug-2019 18:51
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>89.2</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>12-Aug-2019 18:51</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>101</i>			<i>81-113</i>	<i>%REC</i>	<i>1</i>	<i>12-Aug-2019 18:51</i>
<i>Surr: Dibromofluoromethane</i>	<i>92.0</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>12-Aug-2019 18:51</i>
<i>Surr: Toluene-d8</i>	<i>101</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>12-Aug-2019 18:51</i>

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

Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works  
 Sample ID: W-1620-Fractank-20190810  
 Collection Date: 10-Aug-2019 14:00

**ANALYTICAL REPORT**

WorkOrder:HS19080556  
 Lab ID:HS19080556-06  
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>			<b>Method:SW8260</b>			Analyst: PC	
Benzene		U	0.00020	0.0010	mg/L	1	12-Aug-2019 20:03
Ethylbenzene	<b>0.0018</b>		<b>0.00030</b>	<b>0.0010</b>	mg/L	1	12-Aug-2019 20:03
Toluene	<b>0.045</b>		<b>0.00020</b>	<b>0.0010</b>	mg/L	1	12-Aug-2019 20:03
Xylenes, Total	<b>0.020</b>		<b>0.00030</b>	<b>0.0010</b>	mg/L	1	12-Aug-2019 20:03
Surr: 1,2-Dichloroethane-d4	89.8			70-126	%REC	1	12-Aug-2019 20:03
Surr: 4-Bromofluorobenzene	102			81-113	%REC	1	12-Aug-2019 20:03
Surr: Dibromofluoromethane	91.8			77-123	%REC	1	12-Aug-2019 20:03
Surr: Toluene-d8	102			82-127	%REC	1	12-Aug-2019 20:03
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>			<b>Method:SW8270</b>			Prep:SW3510 / 12-Aug-2019 Analyst: GEY	
Acenaphthene	<b>0.00039</b>		<b>0.000028</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Acenaphthylene	<b>0.000035</b>	J	<b>0.000015</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Anthracene	<b>0.00020</b>		<b>0.000014</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Benz(a)anthracene	<b>0.00017</b>		<b>0.000051</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Benzo(a)pyrene	<b>0.000091</b>	J	<b>0.000020</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Benzo(b)fluoranthene	<b>0.00017</b>		<b>0.000023</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Benzo(g,h,i)perylene	<b>0.000074</b>	J	<b>0.000014</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Benzo(k)fluoranthene	<b>0.000074</b>	J	<b>0.000019</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Chrysene	<b>0.00027</b>		<b>0.000021</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Dibenz(a,h)anthracene	<b>0.000038</b>	J	<b>0.000024</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Dibenzofuran	<b>0.00019</b>		<b>0.000020</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Fluoranthene	<b>0.00092</b>		<b>0.000010</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Fluorene	<b>0.00037</b>		<b>0.000031</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Indeno(1,2,3-cd)pyrene	<b>0.000058</b>	J	<b>0.000022</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Naphthalene	<b>0.0070</b>		<b>0.000020</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Phenanthrene	<b>0.00079</b>		<b>0.000021</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Pyrene	<b>0.00065</b>		<b>0.000019</b>	<b>0.00010</b>	mg/L	1	12-Aug-2019 19:25
Surr: 2-Fluorobiphenyl	77.6			40-125	%REC	1	12-Aug-2019 19:25
Surr: 4-Terphenyl-d14	80.9			40-135	%REC	1	12-Aug-2019 19:25
Surr: Nitrobenzene-d5	70.2			41-120	%REC	1	12-Aug-2019 19:25
<b>LOW-LEVEL TEXAS TPH BY TX1005</b>			<b>Method:TX1005</b>			Prep:TX1005PR / 12-Aug-2019 Analyst: MBG	
nC6 to nC12	<b>0.91</b>		<b>0.20</b>	<b>0.49</b>	mg/L	1	14-Aug-2019 01:51
>nC12 to nC28	<b>0.31</b>	J	<b>0.20</b>	<b>0.49</b>	mg/L	1	14-Aug-2019 01:51
>nC28 to nC35		U	0.20	0.49	mg/L	1	14-Aug-2019 01:51
Total Petroleum Hydrocarbon	<b>1.22</b>		<b>0.20</b>	<b>0.49</b>	mg/L	1	14-Aug-2019 01:51
Surr: 2-Fluorobiphenyl	95.6			70-130	%REC	1	14-Aug-2019 01:51
Surr: Trifluoromethyl benzene	102			70-130	%REC	1	14-Aug-2019 01:51
<b>FLASH POINT BY PENSKY-MARTENS SW1010A</b>			<b>Method:SW1010</b>			Analyst: KAH	
Ignitability	> 212		70.0	70.0	°F	1	14-Aug-2019 15:00

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

Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works  
 Sample ID: W-1620-Fractank-20190810  
 Collection Date: 10-Aug-2019 14:00

**ANALYTICAL REPORT**

WorkOrder:HS19080556  
 Lab ID:HS19080556-06  
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>REACTIVE CYANIDE</b>		<b>Method:SW7.3.3.2</b>			Prep:SW7.3.3.2		Analyst: MZD
Reactive Cyanide	U	n	100	100	mg/Kg	1	14-Aug-2019 16:26
<b>REACTIVE SULFIDE</b>		<b>Method:SW7.3.4.2</b>					Analyst: MZD
Reactive Sulfide	U	n	100	100	mg/Kg	1	14-Aug-2019 16:17
<b>PH BY SW9040C</b>		<b>Method:SW9040C</b>					Analyst: MWG
pH	7.78	H	0.100	0.100	pH Units	1	15-Aug-2019 12:00
Temp Deg C @pH	21.3	H	0	0	DEG C	1	15-Aug-2019 12:00

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

**WEIGHT LOG**

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**Batch ID:** 144039      **Method:** LOW-LEVEL TEXAS TPH BY TX1005      **Prep:** TX 1005\_W PR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19080556-01	1	30.23	3 (mL)	0.09924
HS19080556-03	1	30.13	3 (mL)	0.09957
HS19080556-06	1	30.69	3 (mL)	0.09775

**Batch ID:** 144041      **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D      **Prep:** 3510\_B\_LOW

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19080556-01	1	990	1 (mL)	0.00101
HS19080556-03	1	1000	1 (mL)	0.001
HS19080556-06	1	980	1 (mL)	0.00102

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID:</b> 144039 ( 0 )		<b>Test Name :</b> LOW-LEVEL TEXAS TPH BY TX1005			<b>Matrix:</b> Water	
HS19080556-01	W-1620-RO-20190810	10 Aug 2019 10:50		12 Aug 2019 11:30	14 Aug 2019 00:53	1
HS19080556-03	W-1620-RO-Ditch-20190810	10 Aug 2019 11:15		12 Aug 2019 11:30	14 Aug 2019 01:22	1
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00		12 Aug 2019 11:30	14 Aug 2019 01:51	1
<b>Batch ID:</b> 144041 ( 0 )		<b>Test Name :</b> LOW-LEVEL SEMIVOLATILES BY 8270D			<b>Matrix:</b> Water	
HS19080556-01	W-1620-RO-20190810	10 Aug 2019 10:50		12 Aug 2019 13:04	12 Aug 2019 18:46	1
HS19080556-03	W-1620-RO-Ditch-20190810	10 Aug 2019 11:15		12 Aug 2019 13:04	12 Aug 2019 19:05	1
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00		12 Aug 2019 13:04	12 Aug 2019 19:25	1
<b>Batch ID:</b> R344125 ( 0 )		<b>Test Name :</b> LOW LEVEL VOLATILES BY SW8260C			<b>Matrix:</b> Water	
HS19080556-01	W-1620-RO-20190810	10 Aug 2019 10:50			12 Aug 2019 19:15	1
HS19080556-03	W-1620-RO-Ditch-20190810	10 Aug 2019 11:15			12 Aug 2019 19:39	1
HS19080556-04	WQ-1620-TB-20190810	10 Aug 2019 10:30			12 Aug 2019 18:51	1
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00			12 Aug 2019 20:03	1
<b>Batch ID:</b> R344268 ( 0 )		<b>Test Name :</b> REACTIVE SULFIDE			<b>Matrix:</b> Water	
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00			14 Aug 2019 16:17	1
<b>Batch ID:</b> R344271 ( 0 )		<b>Test Name :</b> REACTIVE CYANIDE			<b>Matrix:</b> Water	
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00			14 Aug 2019 16:26	1
<b>Batch ID:</b> R344272 ( 0 )		<b>Test Name :</b> FLASH POINT BY PENSKY-MARTENS SW1010A			<b>Matrix:</b> Water	
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00			14 Aug 2019 15:00	1
<b>Batch ID:</b> R344324 ( 0 )		<b>Test Name :</b> PH BY SW9040C			<b>Matrix:</b> Water	
HS19080556-06	W-1620-Fractank-20190810	10 Aug 2019 14:00			15 Aug 2019 12:00	1

WorkOrder: HS19080556  
 InstrumentID: FID-13  
 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	0.28	0.20	0.50
A	>nC12 to nC28	TPH-1005-2	0.25	0.29	0.20	0.50
A	>nC28 to nC35	TPH-1005-4	0.25	0.28	0.20	0.50
A	Total Petroleum Hydrocarbon	TPH	0.25	0.28	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: HS19080556  
 InstrumentID: SV-7  
 Test Code: 8270\_LOW\_W  
 Test Number: SW8270  
 Test Name: Low-Level Semivolatiles by 8270D

**METHOD DETECTION /  
 REPORTING LIMITS**

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

Type	Analyte	CAS	DCS Spike	DCS	MDL	PQL
A	Acenaphthene	83-32-9	0.00010	0.00011	0.000027	0.00010
A	Acenaphthylene	208-96-8	0.000050	0.000050	0.000015	0.00010
A	Anthracene	120-12-7	0.00010	0.00011	0.000014	0.00010
A	Anthracene	120-12-7	0.000050	0.000055	0.000014	0.00010
A	Benz(a)anthracene	56-55-3	0.000050	0.000068	0.000050	0.00010
A	Benz(a)anthracene	56-55-3	0.00010	0.000099	0.000050	0.00010
A	Benzo(a)pyrene	50-32-8	0.00010	0.000076	0.000020	0.00010
A	Benzo(a)pyrene	50-32-8	0.000050	0.000053	0.000020	0.00010
A	Benzo(b)fluoranthene	205-99-2	0.000050	0.000067	0.000023	0.00010
A	Benzo(b)fluoranthene	205-99-2	0.00010	0.000093	0.000023	0.00010
A	Benzo(g,h,i)perylene	191-24-2	0.00010	0.000091	0.000014	0.00010
A	Benzo(g,h,i)perylene	191-24-2	0.000050	0.000061	0.000014	0.00010
A	Benzo(k)fluoranthene	207-08-9	0.000050	0.000060	0.000019	0.00010
A	Benzo(k)fluoranthene	207-08-9	0.00010	0.00011	0.000019	0.00010
A	Chrysene	218-01-9	0.000050	0.000066	0.000021	0.00010
A	Chrysene	218-01-9	0.00010	0.00011	0.000021	0.00010
A	Dibenz(a,h)anthracene	53-70-3	0.000050	0.000059	0.000024	0.00010
A	Dibenz(a,h)anthracene	53-70-3	0.00010	0.000083	0.000024	0.00010
A	Dibenzofuran	132-64-9	0.00010	0.000094	0.000020	0.00010
A	Dibenzofuran	132-64-9	0.000050	0.000052	0.000020	0.00010
A	Fluoranthene	206-44-0	0.000050	0.000053	0.000010	0.00010
A	Fluoranthene	206-44-0	0.00010	0.00012	0.000010	0.00010
A	Fluorene	86-73-7	0.00010	0.00012	0.000030	0.00010
A	Fluorene	86-73-7	0.000050	0.000052	0.000030	0.00010
A	Indeno(1,2,3-cd)pyrene	193-39-5	0.000050	0.000066	0.000022	0.00010
A	Indeno(1,2,3-cd)pyrene	193-39-5	0.00010	0.000066	0.000022	0.00010
A	Naphthalene	91-20-3	0.00010	0.00010	0.000020	0.00010
A	Naphthalene	91-20-3	0.000050	0.000061	0.000020	0.00010
A	Phenanthrene	85-01-8	0.000050	0.000055	0.000021	0.00010
A	Phenanthrene	85-01-8	0.00010	0.00011	0.000021	0.00010
A	Pyrene	129-00-0	0.000050	0.000061	0.000019	0.00010
A	Pyrene	129-00-0	0.00010	0.00011	0.000019	0.00010
S	2-Fluorobiphenyl	321-60-8	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



WorkOrder: HS19080556  
 InstrumentID: VOA6  
 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	0.00062	0.00020	0.0010
A	Ethylbenzene	100-41-4	0.00050	0.00062	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	0.0019	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:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

**Batch ID:** 144039 ( 0 )      **Instrument:** FID-13      **Method:** LOW-LEVEL TEXAS TPH BY TX1005

<b>MBLK</b>		Sample ID: <b>MBLK-144039</b>		Units: <b>mg/L</b>		Analysis Date: <b>13-Aug-2019 21:59</b>				
Client ID:		Run ID: <b>FID-13_344222</b>		SeqNo: <b>5209078</b>		PrepDate: <b>12-Aug-2019</b>		DF: <b>1</b>		
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								
<i>Surr: 2-Fluorobiphenyl</i>	2.242	0	2.5	0	89.7	70 - 130				
<i>Surr: Trifluoromethyl benzene</i>	2.422	0	2.5	0	96.9	70 - 130				

<b>LCS</b>		Sample ID: <b>LCS-144039</b>		Units: <b>mg/L</b>		Analysis Date: <b>13-Aug-2019 22:28</b>				
Client ID:		Run ID: <b>FID-13_344222</b>		SeqNo: <b>5209079</b>		PrepDate: <b>12-Aug-2019</b>		DF: <b>1</b>		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	22.75	0.50	25	0	91.0	75 - 125				
>nC12 to nC28	22.3	0.50	25	0	89.2	75 - 125				
<i>Surr: 2-Fluorobiphenyl</i>	2.403	0	2.5	0	96.1	70 - 130				
<i>Surr: Trifluoromethyl benzene</i>	2.515	0	2.5	0	101	70 - 130				

<b>LCSD</b>		Sample ID: <b>LCSD-144039</b>		Units: <b>mg/L</b>		Analysis Date: <b>13-Aug-2019 22:57</b>				
Client ID:		Run ID: <b>FID-13_344222</b>		SeqNo: <b>5209080</b>		PrepDate: <b>12-Aug-2019</b>		DF: <b>1</b>		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	23.73	0.50	25	0	94.9	75 - 125	22.75	4.23	20	
>nC12 to nC28	23.92	0.50	25	0	95.7	75 - 125	22.3	7	20	
<i>Surr: 2-Fluorobiphenyl</i>	2.546	0	2.5	0	102	70 - 130	2.403	5.79	20	
<i>Surr: Trifluoromethyl benzene</i>	2.57	0	2.5	0	103	70 - 130	2.515	2.17	20	

<b>MS</b>		Sample ID: <b>HS19080562-01MS</b>		Units: <b>mg/L</b>		Analysis Date: <b>13-Aug-2019 23:55</b>				
Client ID:		Run ID: <b>FID-13_344222</b>		SeqNo: <b>5209082</b>		PrepDate: <b>12-Aug-2019</b>		DF: <b>1</b>		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	24.62	0.49	24.65	2.446	89.9	75 - 125				
>nC12 to nC28	21.94	0.49	24.65	0.7123	86.1	75 - 125				
<i>Surr: 2-Fluorobiphenyl</i>	2.41	0	2.465	0	97.7	70 - 130				
<i>Surr: Trifluoromethyl benzene</i>	2.457	0	2.465	0	99.7	70 - 130				

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

**Batch ID:** 144039 ( 0 )      **Instrument:** FID-13      **Method:** LOW-LEVEL TEXAS TPH BY TX1005

<b>MSD</b>		Sample ID: <b>HS19080562-01MSD</b>			Units: <b>mg/L</b>		Analysis Date: <b>14-Aug-2019 00:24</b>			
Client ID:		Run ID: <b>FID-13_344222</b>			SeqNo: <b>5209083</b>		PrepDate: <b>12-Aug-2019</b>		DF: <b>1</b>	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	25.44	0.49	24.55	2.446	93.7	75 - 125	24.62	3.29	20	
>nC12 to nC28	23.78	0.49	24.55	0.7123	94.0	75 - 125	21.94	8.03	20	
<i>Surr: 2-Fluorobiphenyl</i>	2.452	0	2.455	0	99.9	70 - 130	2.41	1.75	20	
<i>Surr: Trifluoromethyl benzene</i>	2.462	0	2.455	0	100	70 - 130	2.457	0.182	20	

The following samples were analyzed in this batch: HS19080556-01      HS19080556-03      HS19080556-06

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

Batch ID: 144041 ( 0 )		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
<b>MBLK</b>	Sample ID: <b>MBLK-144041</b>	Units: <b>ug/L</b>			Analysis Date: <b>12-Aug-2019 17:26</b>					
Client ID:	Run ID: <b>SV-7_344099</b>	SeqNo: <b>5207387</b>		PrepDate: <b>12-Aug-2019</b>		DF: <b>1</b>				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	U	0.10								
Acenaphthylene	U	0.10								
Anthracene	U	0.10								
Benz(a)anthracene	U	0.10								
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								
Chrysene	U	0.10								
Dibenz(a,h)anthracene	U	0.10								
Dibenzofuran	U	0.10								
Fluoranthene	U	0.10								
Fluorene	U	0.10								
Indeno(1,2,3-cd)pyrene	U	0.10								
Naphthalene	U	0.10								
Phenanthrene	U	0.10								
Pyrene	U	0.10								
<i>Surr: 2-Fluorobiphenyl</i>	3.217	0.20	5	0	64.3	40 - 125				
<i>Surr: 4-Terphenyl-d14</i>	3.118	0.20	5	0	62.4	40 - 135				
<i>Surr: Nitrobenzene-d5</i>	2.947	0.20	5	0	58.9	41 - 120				

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

Batch ID: 144041 ( 0 )		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-144041	Units: ug/L			Analysis Date: 12-Aug-2019 17:46					
Client ID:	Run ID: SV-7_344099	SeqNo: 5207388		PrepDate: 12-Aug-2019		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	3.146	0.10	5	0	62.9	45 - 120				
Acenaphthylene	3.109	0.10	5	0	62.2	47 - 120				
Anthracene	3.194	0.10	5	0	63.9	45 - 120				
Benz(a)anthracene	2.995	0.10	5	0	59.9	40 - 120				
Benzo(a)pyrene	2.637	0.10	5	0	52.7	45 - 120				
Benzo(b)fluoranthene	2.672	0.10	5	0	53.4	50 - 120				
Benzo(g,h,i)perylene	2.554	0.10	5	0	51.1	42 - 127				
Benzo(k)fluoranthene	2.514	0.10	5	0	50.3	45 - 127				
Chrysene	3.229	0.10	5	0	64.6	43 - 120				
Dibenz(a,h)anthracene	2.582	0.10	5	0	51.6	45 - 125				
Dibenzofuran	3.256	0.10	5	0	65.1	50 - 120				
Fluoranthene	3.506	0.10	5	0	70.1	45 - 125				
Fluorene	3.387	0.10	5	0	67.7	49 - 120				
Indeno(1,2,3-cd)pyrene	3.066	0.10	5	0	61.3	41 - 128				
Naphthalene	3.515	0.10	5	0	70.3	45 - 120				
Phenanthrene	3.279	0.10	5	0	65.6	45 - 121				
Pyrene	3.089	0.10	5	0	61.8	40 - 130				
Surr: 2-Fluorobiphenyl	3.28	0.20	5	0	65.6	40 - 125				
Surr: 4-Terphenyl-d14	3.154	0.20	5	0	63.1	40 - 135				
Surr: Nitrobenzene-d5	2.753	0.20	5	0	55.1	41 - 120				

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

**Batch ID:** 144041 ( 0 )      **Instrument:** SV-7      **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D

LCSD	Sample ID: LCSD-144041	Units: ug/L			Analysis Date: 12-Aug-2019 18:06					
Client ID:	Run ID: SV-7_344099	SeqNo: 5207389	PrepDate: 12-Aug-2019	DF: 1						
Analyte	Result	SQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	3.102	0.10	5	0	62.0	45 - 120	3.146	1.43	20	
Acenaphthylene	3.056	0.10	5	0	61.1	47 - 120	3.109	1.74	20	
Anthracene	3.234	0.10	5	0	64.7	45 - 120	3.194	1.24	20	
Benz(a)anthracene	3.075	0.10	5	0	61.5	40 - 120	2.995	2.63	20	
Benzo(a)pyrene	2.691	0.10	5	0	53.8	45 - 120	2.637	2.02	20	
Benzo(b)fluoranthene	3.021	0.10	5	0	60.4	50 - 120	2.672	12.3	20	
Benzo(g,h,i)perylene	2.633	0.10	5	0	52.7	42 - 127	2.554	3.03	20	
Benzo(k)fluoranthene	2.63	0.10	5	0	52.6	45 - 127	2.514	4.5	20	
Chrysene	3.052	0.10	5	0	61.0	43 - 120	3.229	5.62	20	
Dibenz(a,h)anthracene	2.767	0.10	5	0	55.3	45 - 125	2.582	6.9	20	
Dibenzofuran	3.179	0.10	5	0	63.6	50 - 120	3.256	2.38	20	
Fluoranthene	3.53	0.10	5	0	70.6	45 - 125	3.506	0.701	20	
Fluorene	3.288	0.10	5	0	65.8	49 - 120	3.387	2.96	20	
Indeno(1,2,3-cd)pyrene	3.206	0.10	5	0	64.1	41 - 128	3.066	4.44	20	
Naphthalene	3.508	0.10	5	0	70.2	45 - 120	3.515	0.179	20	
Phenanthrene	3.307	0.10	5	0	66.1	45 - 121	3.279	0.855	20	
Pyrene	3.176	0.10	5	0	63.5	40 - 130	3.089	2.77	20	
Surr: 2-Fluorobiphenyl	3.185	0.20	5	0	63.7	40 - 125	3.28	2.92	20	
Surr: 4-Terphenyl-d14	3.099	0.20	5	0	62.0	40 - 135	3.154	1.75	20	
Surr: Nitrobenzene-d5	2.804	0.20	5	0	56.1	41 - 120	2.753	1.84	20	

The following samples were analyzed in this batch: HS19080556-01      HS19080556-03      HS19080556-06

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

Batch ID: R344125 ( 0 )		Instrument: VOA6		Method: LOW LEVEL VOLATILES BY SW8260C						
<b>MBLK</b>	Sample ID: <b>VBLKW-190812</b>	Units: <b>ug/L</b>			Analysis Date: <b>12-Aug-2019 12:26</b>					
Client ID:	Run ID: <b>VOA6_344125</b>	SeqNo: <b>5206800</b>		PrepDate:		DF: <b>1</b>				
Analyte	Result	MLQ	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								
<i>Surr: 1,2-Dichloroethane-d4</i>	44.97	1.0	50	0	89.9	70 - 123				
<i>Surr: 4-Bromofluorobenzene</i>	50.49	1.0	50	0	101	82 - 115				
<i>Surr: Dibromofluoromethane</i>	46.1	1.0	50	0	92.2	73 - 126				
<i>Surr: Toluene-d8</i>	51.42	1.0	50	0	103	81 - 120				
<b>LCS</b>	Sample ID: <b>VLCSW-190812</b>	Units: <b>ug/L</b>			Analysis Date: <b>12-Aug-2019 11:38</b>					
Client ID:	Run ID: <b>VOA6_344125</b>	SeqNo: <b>5206799</b>		PrepDate:		DF: <b>1</b>				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Benzene	19.19	1.0	20	0	96.0	74 - 120				
Ethylbenzene	18.52	1.0	20	0	92.6	77 - 117				
Toluene	18.96	1.0	20	0	94.8	77 - 118				
Xylenes, Total	56.46	1.0	60	0	94.1	75 - 122				
<i>Surr: 1,2-Dichloroethane-d4</i>	50.82	1.0	50	0	102	70 - 130				
<i>Surr: 4-Bromofluorobenzene</i>	51.45	1.0	50	0	103	82 - 115				
<i>Surr: Dibromofluoromethane</i>	50.86	1.0	50	0	102	73 - 126				
<i>Surr: Toluene-d8</i>	47.64	1.0	50	0	95.3	81 - 120				
<b>MS</b>	Sample ID: <b>HS19080444-02MS</b>	Units: <b>ug/L</b>			Analysis Date: <b>12-Aug-2019 17:15</b>					
Client ID:	Run ID: <b>VOA6_344125</b>	SeqNo: <b>5206802</b>		PrepDate:		DF: <b>1</b>				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Benzene	19.89	1.0	20	1.975	89.6	70 - 127				
Ethylbenzene	19.22	1.0	20	0	96.1	70 - 124				
Toluene	18.92	1.0	20	0	94.6	70 - 123				
Xylenes, Total	56.84	1.0	60	0	94.7	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	46.77	1.0	50	0	93.5	70 - 126				
<i>Surr: 4-Bromofluorobenzene</i>	52.77	1.0	50	0	106	81 - 113				
<i>Surr: Dibromofluoromethane</i>	46.71	1.0	50	0	93.4	77 - 123				
<i>Surr: Toluene-d8</i>	49.81	1.0	50	0	99.6	82 - 127				

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

**Batch ID:** R344125 ( 0 )      **Instrument:** VOA6      **Method:** LOW LEVEL VOLATILES BY SW8260C

<b>MSD</b>		Sample ID: <b>HS19080444-02MSD</b>			Units: <b>ug/L</b>		Analysis Date: <b>12-Aug-2019 17:39</b>			
Client ID:		Run ID: <b>VOA6_344125</b>			SeqNo: <b>5206803</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.64	1.0	20	1.975	93.3	70 - 127	19.89	3.66	20	
Ethylbenzene	19.8	1.0	20	0	99.0	70 - 124	19.22	3.02	20	
Toluene	19.61	1.0	20	0	98.1	70 - 123	18.92	3.59	20	
Xylenes, Total	59.22	1.0	60	0	98.7	70 - 130	56.84	4.1	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>44.97</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>89.9</i>	<i>70 - 126</i>	<i>46.77</i>	<i>3.92</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>52.86</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>81 - 113</i>	<i>52.77</i>	<i>0.171</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>46.88</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>93.8</i>	<i>77 - 123</i>	<i>46.71</i>	<i>0.376</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>50.85</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>82 - 127</i>	<i>49.81</i>	<i>2.07</i>	<i>20</i>	

The following samples were analyzed in this batch: HS19080556-01      HS19080556-03      HS19080556-04      HS19080556-06



**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

<b>Batch ID:</b> R344268 ( 0 )	<b>Instrument:</b> WetChem_HS	<b>Method:</b> REACTIVE SULFIDE
--------------------------------	-------------------------------	---------------------------------

<b>MBLK</b>	Sample ID: <b>MBLK-344268</b>	Units: <b>mg/Kg</b>	Analysis Date: <b>14-Aug-2019 16:17</b>							
Client ID:	Run ID: <b>WetChem_HS_344268</b>	SeqNo: <b>5209980</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Sulfide U 100

<b>LCS</b>	Sample ID: <b>LCS-344268</b>	Units: <b>mg/Kg</b>	Analysis Date: <b>14-Aug-2019 16:17</b>							
Client ID:	Run ID: <b>WetChem_HS_344268</b>	SeqNo: <b>5209981</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Reactive Sulfide 72 10.0 100 0 72.0 20 - 120

<b>MS</b>	Sample ID: <b>HS19080655-03MS</b>	Units: <b>mg/Kg</b>	Analysis Date: <b>14-Aug-2019 16:17</b>							
Client ID:	Run ID: <b>WetChem_HS_344268</b>	SeqNo: <b>5209983</b>	PrepDate: DF: <b>1</b>							
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

The following samples were analyzed in this batch:

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

<b>Batch ID:</b> R344271 ( 0 )		<b>Instrument:</b> UV-2450		<b>Method:</b> REACTIVE CYANIDE					
<b>MBLK</b>	Sample ID: <b>MBLK-R344271</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>14-Aug-2019 16:26</b>					
Client ID:	Run ID: <b>UV-2450_344271</b>	SeqNo: <b>5210022</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Reactive Cyanide U 100

<b>LCS</b>	Sample ID: <b>LCS-R344271</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>14-Aug-2019 16:26</b>					
Client ID:	Run ID: <b>UV-2450_344271</b>	SeqNo: <b>5210021</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Reactive Cyanide 0.77 10.0 10 0 7.70 5 - 100 J

<b>MS</b>	Sample ID: <b>HS19080655-03MS</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>14-Aug-2019 16:26</b>					
Client ID:	Run ID: <b>UV-2450_344271</b>	SeqNo: <b>5210023</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Reactive Cyanide 0.83 10.0 10 0 8.30 5 - 100 J

The following samples were analyzed in this batch:

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

**Batch ID:** R344272 ( 0 )      **Instrument:** WetChem\_HS      **Method:** FLASH POINT BY PENSKY-MARTENS SW1010A

**LCS**      Sample ID: **LCS-R344272**      Units: °F      Analysis Date: **14-Aug-2019 15:00**  
 Client ID:      Run ID: **WetChem\_HS\_344272** SeqNo: **5210060** PrepDate:      DF: 1  
 Analyte      Result      MQL      SPK Val      SPK Ref Value      %REC      Control Limit      RPD Ref Value      %RPD      RPD Limit Qual

Ignitability      83.57      70.0      81      0      103      95 - 105

**DUP**      Sample ID: **HS19080556-06DUP**      Units: °F      Analysis Date: **14-Aug-2019 15:00**  
 Client ID: **W-1620-Fractank-20190810**      Run ID: **WetChem\_HS\_344272** SeqNo: **5210061** PrepDate:      DF: 1  
 Analyte      Result      MQL      SPK Val      SPK Ref Value      %REC      Control Limit      RPD Ref Value      %RPD      RPD Limit Qual

Ignitability      > 212      70.0                          0      0 20

The following samples were analyzed in this batch:

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QC BATCH REPORT**

<b>Batch ID:</b> R344324 ( 0 )		<b>Instrument:</b> WetChem_HS		<b>Method:</b> PH BY SW9040C						
<b>DUP</b>	Sample ID: <b>HS19080734-01DUP</b>	Units: <b>pH Units</b>		Analysis Date: <b>15-Aug-2019 12:00</b>						
Client ID:	Run ID: <b>WetChem_HS_344324</b>	SeqNo: <b>5211140</b>		PrepDate:		DF: <b>1</b>				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.28	0.100					7.27	0.137	10	
Temp Deg C @pH	20.8	0					20.8	0	10	

The following samples were analyzed in this batch:

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works  
**WorkOrder:** HS19080556

**QUALIFIERS,  
ACRONYMS, UNITS**

<b>Qualifier</b>	<b>Description</b>
*	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

<b>Acronym</b>	<b>Description</b>
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

<b>Unit Reported</b>	<b>Description</b>
mg/L	Milligrams per Liter

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

<b>Agency</b>	<b>Number</b>	<b>Expire Date</b>
Arkansas	19-028-0	27-Mar-2020
California	2919, 2019-2020	30-Apr-2020
Dept of Defense	ANAB L2231	20-Dec-2021
Kansas	E-10352 2019-2020	31-Jul-2020
Kentucky	123043, 2019-2020	30-Apr-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2019	31-Dec-2019
Oklahoma	2018-156	31-Aug-2019
Texas	TX104704231-19-23	30-Apr-2020

Sample Receipt Checklist

Client Name: PBW
Work Order: HS19080556

Date/Time Received: 10-Aug-2019 14:55
Received by: AC

Checklist completed by: Jared R. Makan
eSignature
Date: 12-Aug-2019

Reviewed by: Dane J. Wacasey
eSignature
Date: 12-Aug-2019

Matrices: Water, Solid

Carrier name: FedEx Priority Overnight

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [ ] No [ ] Not Present [checked]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Samplers name present on COC? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Container/Temp Blank temperature in compliance? Yes [checked] No [ ]

Temperature(s)/Thermometer(s): 0.8c/0.8 UC/C IR25
Cooler(s)/Kit(s): 44623
Date/Time sample(s) sent to storage: 08/12/2019 11:55

- Water - VOA vials have zero headspace? Yes [checked] No [ ] No VOA vials submitted [ ]
Water - pH acceptable upon receipt? Yes [checked] No [ ] N/A [ ]
pH adjusted? Yes [ ] No [ ] N/A [checked]

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

10



Cincinnati, OH  
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# Chain of Custody Form

Page \_\_\_\_ of \_\_\_\_

COC ID: 144945

Houston, TX  
+1 281 530 5656


Spring City, PA  
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Middletown, PA  
+1 717 944 5541

Salt Lake City, UT  
+1 801 266 7700

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		Project Name	UPRR	A	BTEX																						
Work Order		Project Number		B	TPH																						
Company Name	Goider Associates	Bill To Company	UPRR	C	PAHs																						
Send Report To	Eric Matzner	Invoice Attn		D	Hold																						
Address	2201 DoubleCreek R	Address		E	<p style="text-align: center;"><b>HS19080556</b></p> <p style="text-align: center;">Goider Associates inc. Houston TX-Wood Preserving Works</p> 																						
				F																							
City/State/Zip	Round Rock TX 78664	City/State/Zip		G																							
Phone		Phone		H																							
Fax		Fax		I																							
e-Mail Address	eric_matzner@goider.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	W-1620-RO-20190810	8/10/19	1050	SW	1.8	8	X	X	X								
2	W-1620-RO-Liberty Rd-20190810	8/10/19	1115	SW	1.8	8	X			X							
3	W-1620-RO-Ditch-20190810	8/10/19	1115	SW	1.8	8	X	X	X								
4	TB-20190810	8/10/19	1030	GC	1.8	3	X										
5	W-1620-Sheen-20190810	8/10/19	1200	net	1.8	1				X							
6	W-1620-Fractank-20190810	8/10/19	1400	W	1.8	8	X	X	X								
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign Brenda Basile / Frances Devore / Jacqueline Espinal delivory		Shipment Method Hand delivery		Required Turnaround Time: (Check Box)				Results Due Date:			
				<input type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				48 hrs			
Relinquished by: Brenda Basile	Date: 8/10/19	Time: 14:55	Received by:	Notes:							
Relinquished by:	Date: 8/10/19	Time: 14:55	Received by (Laboratory): AC	Cooler ID: 44623	Cooler Temp: 0.8	QC Package: (Check One Box Below)					
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			<input type="checkbox"/> Level II Std QC <input checked="" type="checkbox"/> TRRP Checklist <input type="checkbox"/> Level III Std QC/Raw Date <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> Level IV SW846/CLP <input type="checkbox"/> Other					
Preservative Key: 1-HCl    2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH    5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>4</sub> 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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