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10450 Stancliff Rd. Suite 210  
Houston, TX 77099  
T: +1 281 530 5656  
F: +1 281 530 5887

March 15, 2021

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

Work Order: **HS21030092**

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

Dear Eric Matzner,

ALS Environmental received 3 sample(s) on Mar 02, 2021 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: DANE.WACASEY  
Dane J. Wacasey

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**Work Order:** HS21030092

**SAMPLE SUMMARY**

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Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21030092-01	WW-1620-IDW01-20210302	Water		02-Mar-2021 11:00	02-Mar-2021 13:35	<input type="checkbox"/>
HS21030092-02	WW-1620-IDW02-20210302	Water		02-Mar-2021 11:30	02-Mar-2021 13:35	<input type="checkbox"/>
HS21030092-03	SO-1620-IDW02-20210302	Sludge		02-Mar-2021 12:00	02-Mar-2021 13:35	<input type="checkbox"/>

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**Work Order:** HS21030092

**CASE NARRATIVE****Work Order Comments**

- This report was revised March 15, 2021 to include TCLP Chromium result for sample SO-1620-IDW02-20210302 which was not included in the original report and the removal of TCLP Chromium for sample WW-1620-IDW02-20210302 which was not requested. Additionally, the request to include TCLP Barium was received March 15, 2021 via email and results for this analyte are contained in this report revision.
- 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 °C.

**GC Semivolatiles by Method TX1005****Batch ID: 163117****Sample ID: SO-1620-IDW02-20210302 (HS21030092-03MS)**

- The recovery of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) associated with this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS/MSD may be due to sample matrix interference. (>nC12 to nC28)

**Sample ID: SO-1620-IDW02-20210302 (HS21030092-03MSD)**

- The recovery of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) associated with this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS/MSD may be due to sample matrix interference. (>nC12 to nC28)

**Batch ID: 163198****Sample ID: WW-1620-IDW02-20210302 (HS21030092-02)**

- Surrogates were spiked 2x normal amount. Calculations were adjusted accordingly

**GCMS Volatiles by Method SW8260****Batch ID: R378961**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Batch ID: R379169****Sample ID: HS21030124-23MS**

- MS and MSD are for an unrelated sample

**Metals by Method SW1311/6020****Batch ID: 163382****Sample ID: HS21030303-01MS**

- MS and MSD are for an unrelated sample

**Metals by Method SW7470A****Batch ID: 163211**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Metals by Method SW6020****Batch ID: 163176**

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**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**Work Order:** HS21030092

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**CASE NARRATIVE**

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**Metals by Method SW6020**

**Batch ID: 163176**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Batch ID: 163195**

**Sample ID: HS21030183-39MS**

- MS and MSD are for an unrelated sample
- 

**Metals by Method SW7471B**

**Batch ID: 163081**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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**WetChemistry by Method SW1010**

**Batch ID: R379197**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
- 

**WetChemistry by Method SW9040C**

**Batch ID: R378987**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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**WetChemistry by Method SM4500 S2-F**

**Batch ID: R378900**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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**WetChemistry by Method SW9014**

**Batch ID: 163103**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works IDW  
 Sample ID: WW-1620-IDW01-20210302  
 Collection Date: 02-Mar-2021 11:00

**ANALYTICAL REPORT**  
 WorkOrder:HS21030092  
 Lab ID:HS21030092-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: AKP			
Benzene	< 0.00020		0.00020	0.0010	mg/L	1	04-Mar-2021 03:15
Ethylbenzene	< 0.00030		0.00030	0.0010	mg/L	1	04-Mar-2021 03:15
Naphthalene	< 0.00030		0.00030	0.0010	mg/L	1	04-Mar-2021 03:15
Toluene	< 0.00020		0.00020	0.0010	mg/L	1	04-Mar-2021 03:15
Xylenes, Total	< 0.00030		0.00030	0.0010	mg/L	1	04-Mar-2021 03:15
Surr: 1,2-Dichloroethane-d4	105			70-126	%REC	1	04-Mar-2021 03:15
Surr: 4-Bromofluorobenzene	98.7			81-113	%REC	1	04-Mar-2021 03:15
Surr: Dibromofluoromethane	104			77-123	%REC	1	04-Mar-2021 03:15
Surr: Toluene-d8	102			82-127	%REC	1	04-Mar-2021 03:15
<b>LOW-LEVEL TEXAS TPH BY TX1005</b>		<b>Method:TX1005</b>		Prep:TX1005PR / 08-Mar-2021		Analyst: MBG	
nC6 to nC12	< 0.19		0.19	0.48	mg/L	1	08-Mar-2021 20:18
>nC12 to nC28	< 0.19		0.19	0.48	mg/L	1	08-Mar-2021 20:18
>nC28 to nC35	< 0.19		0.19	0.48	mg/L	1	08-Mar-2021 20:18
Total Petroleum Hydrocarbon	< 0.19		0.19	0.48	mg/L	1	08-Mar-2021 20:18
Surr: 2-Fluorobiphenyl	118			70-130	%REC	1	08-Mar-2021 20:18
Surr: Trifluoromethyl benzene	120			70-130	%REC	1	08-Mar-2021 20:18
<b>ICP-MS METALS BY SW6020A</b>		<b>Method:SW6020</b>		Prep:SW3010A / 05-Mar-2021		Analyst: JHD	
Arsenic	0.00410		0.000400	0.00200	mg/L	1	06-Mar-2021 00:16
Barium	0.264		0.00190	0.00400	mg/L	1	06-Mar-2021 00:16
Cadmium	0.00124	J	0.000200	0.00200	mg/L	1	06-Mar-2021 00:16
Chromium	0.00403		0.000400	0.00400	mg/L	1	06-Mar-2021 00:16
Lead	0.0686		0.000600	0.00200	mg/L	1	06-Mar-2021 00:16
Selenium	< 0.00110		0.00110	0.00200	mg/L	1	06-Mar-2021 00:16
Silver	< 0.000200		0.000200	0.00200	mg/L	1	06-Mar-2021 00:16
<b>MERCURY BY SW7470A</b>		<b>Method:SW7470A</b>		Prep:SW7470A / 08-Mar-2021		Analyst: MSC	
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	08-Mar-2021 15:08
<b>SULFIDE BY SM4500 S2-F</b>		<b>Method:SM4500 S2-F</b>		Analyst: KVL			
Sulfide	< 1.00		1.00	1.00	mg/L	1	03-Mar-2021 10:00
<b>FLASH POINT BY PENSKEY-MARTENS SW1010A</b>		<b>Method:SW1010</b>		Analyst: TH			
Ignitability	> 212		70.0	70.0	°F	1	08-Mar-2021 08:00
<b>CYANIDE - SW9014</b>		<b>Method:SW9014</b>		Prep:SW9010C / 04-Mar-2021		Analyst: KVL	
Cyanide	< 0.00200		0.00200	0.00500	mg/L	1	04-Mar-2021 15:40
<b>PH BY SW9040C</b>		<b>Method:SW9040C</b>		Analyst: JAC			
pH	7.86	H	0.100	0.100	pH Units	1	04-Mar-2021 12:17
Temp Deg C @pH	22.8	H	0	0	DEG C	1	04-Mar-2021 12:17

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

Revision: 1

Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works IDW  
 Sample ID: WW-1620-IDW02-20210302  
 Collection Date: 02-Mar-2021 11:30

**ANALYTICAL REPORT**  
 WorkOrder:HS21030092  
 Lab ID:HS21030092-02  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>			<b>Method:SW8260</b>		Analyst: AKP		
Benzene	< 0.00020		0.00020	0.0010	mg/L	1	04-Mar-2021 03:57
Ethylbenzene	< 0.00030		0.00030	0.0010	mg/L	1	04-Mar-2021 03:57
Naphthalene	< 0.00030		0.00030	0.0010	mg/L	1	04-Mar-2021 03:57
<b>Toluene</b>	<b>0.00055</b>	J	<b>0.00020</b>	<b>0.0010</b>	<b>mg/L</b>	1	04-Mar-2021 03:57
Xylenes, Total	< 0.00030		0.00030	0.0010	mg/L	1	04-Mar-2021 03:57
Surr: 1,2-Dichloroethane-d4	102			70-126	%REC	1	04-Mar-2021 03:57
Surr: 4-Bromofluorobenzene	99.6			81-113	%REC	1	04-Mar-2021 03:57
Surr: Dibromofluoromethane	102			77-123	%REC	1	04-Mar-2021 03:57
Surr: Toluene-d8	99.0			82-127	%REC	1	04-Mar-2021 03:57
<b>LOW-LEVEL TEXAS TPH BY TX1005</b>			<b>Method:TX1005</b>		Prep:TX1005PR / 08-Mar-2021 Analyst: MBG		
nC6 to nC12	< 0.20		0.20	0.51	mg/L	1	08-Mar-2021 20:48
>nC12 to nC28	< 0.20		0.20	0.51	mg/L	1	08-Mar-2021 20:48
>nC28 to nC35	< 0.20		0.20	0.51	mg/L	1	08-Mar-2021 20:48
Total Petroleum Hydrocarbon	< 0.20		0.20	0.51	mg/L	1	08-Mar-2021 20:48
Surr: 2-Fluorobiphenyl	86.8			70-130	%REC	1	08-Mar-2021 20:48
Surr: Trifluoromethyl benzene	88.0			70-130	%REC	1	08-Mar-2021 20:48
<b>TCLP METALS BY SW6020A</b>			<b>Method:SW1311/6020</b>		Leache:SW1311 / 10-Mar-2021 Prep:SW3010A / 05-Mar-2021 Analyst: JHD		
<b>Lead</b>	<b>1.08</b>		<b>0.00600</b>	<b>0.0500</b>	<b>mg/L</b>	1	12-Mar-2021 12:57
<b>ICP-MS METALS BY SW6020A</b>			<b>Method:SW6020</b>		Prep:SW3010A / 05-Mar-2021 Analyst: JHD		
<b>Arsenic</b>	<b>0.0773</b>		<b>0.00400</b>	<b>0.0200</b>	<b>mg/L</b>	1	06-Mar-2021 00:18
<b>Barium</b>	<b>2.23</b>		<b>0.0190</b>	<b>0.0400</b>	<b>mg/L</b>	1	06-Mar-2021 00:18
<b>Cadmium</b>	<b>0.0703</b>		<b>0.00200</b>	<b>0.0200</b>	<b>mg/L</b>	1	06-Mar-2021 00:18
<b>Chromium</b>	<b>0.310</b>		<b>0.00400</b>	<b>0.0400</b>	<b>mg/L</b>	1	06-Mar-2021 00:18
<b>Lead</b>	<b>4.45</b>		<b>0.00600</b>	<b>0.0200</b>	<b>mg/L</b>	1	06-Mar-2021 00:18
Selenium	< 0.0110		0.0110	0.0200	mg/L	1	06-Mar-2021 00:18
<b>Silver</b>	<b>0.00621</b>	J	<b>0.00200</b>	<b>0.0200</b>	<b>mg/L</b>	1	06-Mar-2021 00:18
<b>MERCURY BY SW7470A</b>			<b>Method:SW7470A</b>		Prep:SW7470A / 08-Mar-2021 Analyst: MSC		
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	08-Mar-2021 15:09
<b>SULFIDE BY SM4500 S2-F</b>			<b>Method:SM4500 S2-F</b>		Analyst: KVL		
<b>Sulfide</b>	<b>3.20</b>		<b>1.00</b>	<b>1.00</b>	<b>mg/L</b>	1	03-Mar-2021 10:00
<b>FLASH POINT BY PENSKY-MARTENS SW1010A</b>			<b>Method:SW1010</b>		Analyst: TH		
Ignitability	> 212		70.0	70.0	°F	1	08-Mar-2021 08:00
<b>CYANIDE - SW9014</b>			<b>Method:SW9014</b>		Prep:SW9010C / 04-Mar-2021 Analyst: KVL		
<b>Cyanide</b>	<b>0.0140</b>		<b>0.00200</b>	<b>0.00500</b>	<b>mg/L</b>	1	04-Mar-2021 15:40
<b>PH BY SW9040C</b>			<b>Method:SW9040C</b>		Analyst: JAC		
<b>pH</b>	<b>9.06</b>	H	<b>0.100</b>	<b>0.100</b>	<b>pH Units</b>	1	04-Mar-2021 12:17
<b>Temp Deg C @pH</b>	<b>22.9</b>	H	<b>0</b>	<b>0</b>	<b>DEG C</b>	1	04-Mar-2021 12:17

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

Revision: 1

Client: Golder Associates Inc.  
 Project: Houston TX-Wood Preserving Works IDW  
 Sample ID: SO-1620-IDW02-20210302  
 Collection Date: 02-Mar-2021 12:00

**ANALYTICAL REPORT**  
 WorkOrder:HS21030092  
 Lab ID:HS21030092-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>			Analyst: WLR		
Benzene	< 0.00053		0.00053	0.0053	mg/Kg	1	08-Mar-2021 21:39
Ethylbenzene	< 0.00074		0.00074	0.0053	mg/Kg	1	08-Mar-2021 21:39
<b>Naphthalene</b>	<b>0.0074</b>		<b>0.00085</b>	<b>0.0053</b>	<b>mg/Kg</b>	1	08-Mar-2021 21:39
Toluene	< 0.00064		0.00064	0.0053	mg/Kg	1	08-Mar-2021 21:39
Xylenes, Total	< 0.0011		0.0011	0.0053	mg/Kg	1	08-Mar-2021 21:39
<i>Surr: 1,2-Dichloroethane-d4</i>	94.3			70-126	%REC	1	08-Mar-2021 21:39
<i>Surr: 4-Bromofluorobenzene</i>	96.0			70-130	%REC	1	08-Mar-2021 21:39
<i>Surr: Dibromofluoromethane</i>	99.2			70-130	%REC	1	08-Mar-2021 21:39
<i>Surr: Toluene-d8</i>	102			70-130	%REC	1	08-Mar-2021 21:39
<b>TEXAS TPH BY TX1005</b>		<b>Method:TX1005</b>			Prep:TX1005PR / 04-Mar-2021		Analyst: MBG
nC6 to nC12	< 15		15	99	mg/Kg	2	07-Mar-2021 08:41
<b>&gt;nC12 to nC28</b>	<b>1,300</b>		<b>19</b>	<b>99</b>	<b>mg/Kg</b>	2	07-Mar-2021 08:41
<b>&gt;nC28 to nC35</b>	<b>860</b>		<b>19</b>	<b>99</b>	<b>mg/Kg</b>	2	07-Mar-2021 08:41
<b>Total Petroleum Hydrocarbon</b>	<b>2,160</b>		<b>15</b>	<b>99</b>	<b>mg/Kg</b>	2	07-Mar-2021 08:41
<i>Surr: 2-Fluorobiphenyl</i>	116			70-130	%REC	2	07-Mar-2021 08:41
<i>Surr: Trifluoromethyl benzene</i>	119			70-130	%REC	2	07-Mar-2021 08:41
<b>TCLP METALS BY SW6020A</b>		<b>Method:SW1311/6020</b>			Leache:SW1311 / 11-Mar-2021		Prep:SW3010A / 11-Mar-2021
<b>Barium</b>	<b>1.67</b>		<b>0.0190</b>	<b>0.200</b>	<b>mg/L</b>	1	12-Mar-2021 12:59
Chromium	< 0.00400		0.00400	0.0500	mg/L	1	12-Mar-2021 12:59
<b>Lead</b>	<b>0.0185</b>	J	<b>0.00600</b>	<b>0.0500</b>	<b>mg/L</b>	1	12-Mar-2021 12:59
<b>METALS BY SW6020A</b>		<b>Method:SW6020</b>			Prep:SW3050B / 09-Mar-2021		Analyst: JHD
<b>Arsenic</b>	<b>3.23</b>		<b>0.0656</b>	<b>0.468</b>	<b>mg/Kg</b>	1	09-Mar-2021 16:21
<b>Barium</b>	<b>253</b>		<b>0.562</b>	<b>9.37</b>	<b>mg/Kg</b>	20	09-Mar-2021 16:29
<b>Cadmium</b>	<b>0.798</b>		<b>0.0253</b>	<b>0.468</b>	<b>mg/Kg</b>	1	09-Mar-2021 16:21
<b>Chromium</b>	<b>236</b>		<b>0.431</b>	<b>9.37</b>	<b>mg/Kg</b>	20	09-Mar-2021 16:29
<b>Lead</b>	<b>66.2</b>		<b>0.0122</b>	<b>0.468</b>	<b>mg/Kg</b>	1	09-Mar-2021 16:21
Selenium	< 0.0852		0.0852	0.468	mg/Kg	1	09-Mar-2021 16:21
<b>Silver</b>	<b>0.0770</b>	J	<b>0.0140</b>	<b>0.468</b>	<b>mg/Kg</b>	1	09-Mar-2021 16:21
<b>MERCURY BY SW7471B</b>		<b>Method:SW7471B</b>			Prep:SW7471B / 05-Mar-2021		Analyst: MSC
<b>Mercury</b>	<b>0.208</b>		<b>0.000484</b>	<b>0.00342</b>	<b>mg/Kg</b>	1	05-Mar-2021 09:47

Weight / Prep Log

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

<b>Batch ID:</b> 4156		<b>Start Date:</b> 04 Mar 2021 09:29		<b>End Date:</b> 04 Mar 2021 09:29	
<b>Method:</b> VOLATILES BY SW8260C					
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Weight Factor</b>	<b>Container Type</b>
HS21030092-03	1	4.718 (g)	5 (mL)	1.06	TerraCore (5035A)
<b>Batch ID:</b> 163081		<b>Start Date:</b> 05 Mar 2021 07:11		<b>End Date:</b> 05 Mar 2021 09:00	
<b>Method:</b> MERCURY PREP - SOLID - 7471B			<b>Prep Code:</b> HG_S_LOWPR		
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>	
HS21030092-03		0.5829 (grams)	40 (mL)	68.62	4-oz glass, Neat
<b>Batch ID:</b> 163103		<b>Start Date:</b> 04 Mar 2021 10:30		<b>End Date:</b> 04 Mar 2021 12:00	
<b>Method:</b> CYANIDE PREP - SW9010C			<b>Prep Code:</b> CN_TW_PR		
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>	
HS21030092-01		50 (mL)	50 (mL)	1	250 mL plastic, NaOH/ASE
HS21030092-02		50 (mL)	50 (mL)	1	250 mL plastic, NaOH/ASE
<b>Batch ID:</b> 163117		<b>Start Date:</b> 04 Mar 2021 13:32		<b>End Date:</b> 04 Mar 2021 14:19	
<b>Method:</b> TX 1005 PREP			<b>Prep Code:</b> TX 1005_S PR		
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>	
HS21030092-03	1	10.15 (g)	10 (mL)	0.9852	4-oz glass, Neat
<b>Batch ID:</b> 163176		<b>Start Date:</b> 05 Mar 2021 14:00		<b>End Date:</b> 05 Mar 2021 18:00	
<b>Method:</b> WATER - SW3010A			<b>Prep Code:</b> 3010A		
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>	
HS21030092-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21030092-02		1 (mL)	10 (mL)	10	120 plastic HNO3
<b>Batch ID:</b> 163195		<b>Start Date:</b> 09 Mar 2021 08:30		<b>End Date:</b> 09 Mar 2021 14:30	
<b>Method:</b> METALS PREP - SOLIDS - SW3050B			<b>Prep Code:</b> 3050_I_LOW		
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>	
HS21030092-03		0.5339 (g)	50 (mL)	93.65	4-oz glass, Neat
<b>Batch ID:</b> 163198		<b>Start Date:</b> 08 Mar 2021 09:43		<b>End Date:</b> 08 Mar 2021 15:28	
<b>Method:</b> TX 1005 PREP			<b>Prep Code:</b> TX 1005_W PR		
<b>Sample ID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>	
HS21030092-01	1	31.35 (g)	3 (mL)	0.09569	40 mL VOA w/ HCL
HS21030092-02	1	29.48 (g)	3 (mL)	0.1018	40 mL VOA w/ HCL



## Weight / Prep Log

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**Batch ID:** 163211      **Start Date:** 08 Mar 2021 09:00      **End Date:** 08 Mar 2021 11:00  
**Method:** MERCURY PREP BY 7470A- WATER      **Prep Code:** HG\_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21030092-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21030092-02		10 (mL)	10 (mL)	1	120 plastic HNO3

**Batch ID:** 163311      **Start Date:** 10 Mar 2021 11:30      **End Date:** 10 Mar 2021 12:00  
**Method:** TCLP METALS EXTRACTION BY SW1311      **Prep Code:** 1311LM EXT

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21030092-02		100 (grams)	2000 (mL)	20	250 mL plastic, Neat

**Batch ID:** 163319      **Start Date:** 10 Mar 2021 17:00      **End Date:** 11 Mar 2021 10:00  
**Method:** TCLP METALS EXTRACTION BY SW1311      **Prep Code:** 1311LM EXT

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21030092-03		100 (grams)	2000 (mL)	20	8-oz glass, Neat

**Batch ID:** 163382      **Start Date:** 11 Mar 2021 13:00      **End Date:** 11 Mar 2021 17:00  
**Method:** TCLP LEACHATE DIGESTION BY SW3010A      **Prep Code:** 3010A\_TCLP

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21030092-02		1 (mL)	10 (mL)	10	250 mL plastic, Neat
HS21030092-03		1 (mL)	10 (mL)	10	8-oz glass, Neat

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID:</b> 163081 ( 0 )		<b>Test Name :</b> MERCURY BY SW7471B			<b>Matrix:</b> Sludge	
HS21030092-03	SO-1620-IDW02-20210302	02 Mar 2021 12:00		05 Mar 2021 09:00	05 Mar 2021 09:47	1
<b>Batch ID:</b> 163103 ( 0 )		<b>Test Name :</b> CYANIDE - SW9014			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00		04 Mar 2021 10:30	04 Mar 2021 15:40	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30		04 Mar 2021 10:30	04 Mar 2021 15:40	1
<b>Batch ID:</b> 163117 ( 0 )		<b>Test Name :</b> TEXAS TPH BY TX1005			<b>Matrix:</b> Sludge	
HS21030092-03	SO-1620-IDW02-20210302	02 Mar 2021 12:00		04 Mar 2021 13:32	07 Mar 2021 08:41	2
<b>Batch ID:</b> 163176 ( 0 )		<b>Test Name :</b> ICP-MS METALS BY SW6020A			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00		05 Mar 2021 18:00	06 Mar 2021 00:16	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30	10 Mar 2021 11:42	05 Mar 2021 18:00	12 Mar 2021 12:57	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30		05 Mar 2021 18:00	06 Mar 2021 00:18	1
<b>Batch ID:</b> 163195 ( 0 )		<b>Test Name :</b> METALS BY SW6020A			<b>Matrix:</b> Sludge	
HS21030092-03	SO-1620-IDW02-20210302	02 Mar 2021 12:00		09 Mar 2021 14:30	09 Mar 2021 16:29	20
HS21030092-03	SO-1620-IDW02-20210302	02 Mar 2021 12:00		09 Mar 2021 14:30	09 Mar 2021 16:21	1
<b>Batch ID:</b> 163198 ( 0 )		<b>Test Name :</b> LOW-LEVEL TEXAS TPH BY TX1005			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00		08 Mar 2021 09:43	08 Mar 2021 20:18	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30		08 Mar 2021 09:43	08 Mar 2021 20:48	1
<b>Batch ID:</b> 163211 ( 0 )		<b>Test Name :</b> MERCURY BY SW7470A			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00		08 Mar 2021 09:00	08 Mar 2021 15:08	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30		08 Mar 2021 09:00	08 Mar 2021 15:09	1
<b>Batch ID:</b> 163382 ( 0 )		<b>Test Name :</b> TCLP METALS BY SW6020A			<b>Matrix:</b> Sludge	
HS21030092-03	SO-1620-IDW02-20210302	02 Mar 2021 12:00	11 Mar 2021 10:00	11 Mar 2021 17:00	12 Mar 2021 12:59	1
<b>Batch ID:</b> R378900 ( 0 )		<b>Test Name :</b> SULFIDE BY SM4500 S2-F			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00			03 Mar 2021 10:00	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30			03 Mar 2021 10:00	1
<b>Batch ID:</b> R378961 ( 0 )		<b>Test Name :</b> LOW LEVEL VOLATILES BY SW8260C			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00			04 Mar 2021 03:15	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30			04 Mar 2021 03:57	1
<b>Batch ID:</b> R378987 ( 0 )		<b>Test Name :</b> PH BY SW9040C			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00			04 Mar 2021 12:17	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30			04 Mar 2021 12:17	1
<b>Batch ID:</b> R379169 ( 0 )		<b>Test Name :</b> VOLATILES BY SW8260C			<b>Matrix:</b> Sludge	
HS21030092-03	SO-1620-IDW02-20210302	02 Mar 2021 12:00			08 Mar 2021 21:39	1
<b>Batch ID:</b> R379197 ( 0 )		<b>Test Name :</b> FLASH POINT BY PENSKY-MARTENS SW1010A			<b>Matrix:</b> Water	
HS21030092-01	WW-1620-IDW01-20210302	02 Mar 2021 11:00			08 Mar 2021 08:00	1
HS21030092-02	WW-1620-IDW02-20210302	02 Mar 2021 11:30			08 Mar 2021 08:00	1

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

Batch ID: 163117 ( 0 )		Instrument: FID-11		Method: TEXAS TPH BY TX1005						
<b>MBLK</b>	Sample ID: <b>MBLK-163117</b>	Units: <b>mg/Kg</b>			Analysis Date: <b>05-Mar-2021 14:29</b>					
Client ID:	Run ID: <b>FID-11_379177</b>	SeqNo: <b>5983731</b>		PrepDate: <b>04-Mar-2021</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	< 7.4	50								
>nC12 to nC28	< 9.8	50								
>nC28 to nC35	< 9.8	50								
Total Petroleum Hydrocarbon	< 7.4	50								
Surr: 2-Fluorobiphenyl	30.06	0	25	0	120	70 - 130				
Surr: Trifluoromethyl benzene	29.1	0	25	0	116	70 - 130				
<b>LCS</b>	Sample ID: <b>LCS-163117</b>	Units: <b>mg/Kg</b>			Analysis Date: <b>05-Mar-2021 14:59</b>					
Client ID:	Run ID: <b>FID-11_379177</b>	SeqNo: <b>5983732</b>		PrepDate: <b>04-Mar-2021</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	226.9	50	250	0	90.8	75 - 125				
>nC12 to nC28	247.3	50	250	0	98.9	75 - 125				
Surr: 2-Fluorobiphenyl	26.44	0	25	0	106	70 - 130				
Surr: Trifluoromethyl benzene	26.34	0	25	0	105	70 - 130				
<b>LCSD</b>	Sample ID: <b>LCSD-163117</b>	Units: <b>mg/Kg</b>			Analysis Date: <b>05-Mar-2021 15:29</b>					
Client ID:	Run ID: <b>FID-11_379177</b>	SeqNo: <b>5983733</b>		PrepDate: <b>04-Mar-2021</b>		DF: <b>1</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	234.7	50	250	0	93.9	75 - 125	226.9	3.38	20	
>nC12 to nC28	258.8	50	250	0	104	75 - 125	247.3	4.54	20	
Surr: 2-Fluorobiphenyl	26.44	0	25	0	106	70 - 130	26.44	0	20	
Surr: Trifluoromethyl benzene	26.52	0	25	0	106	70 - 130	26.34	0.671	20	
<b>MS</b>	Sample ID: <b>HS21030092-03MS</b>	Units: <b>mg/Kg</b>			Analysis Date: <b>07-Mar-2021 09:10</b>					
Client ID: <b>SO-1620-IDW02-20210302</b>	Run ID: <b>FID-11_379177</b>	SeqNo: <b>5983855</b>		PrepDate: <b>04-Mar-2021</b>		DF: <b>2</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	250.5	97	242.5	6.541	101	75 - 125				
>nC12 to nC28	1245	97	242.5	1346	-41.4	75 - 125			SO	
Surr: 2-Fluorobiphenyl	30.09	0	24.25	0	124	70 - 130				
Surr: Trifluoromethyl benzene	29.14	0	24.25	0	120	70 - 130				

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> 163117 ( 0 )		<b>Instrument:</b> FID-11		<b>Method:</b> TEXAS TPH BY TX1005						
<b>MSD</b>	Sample ID: <b>HS21030092-03MSD</b>	Units: <b>mg/Kg</b>			Analysis Date: <b>07-Mar-2021 09:39</b>					
Client ID: <b>SO-1620-IDW02-20210302</b>	Run ID: <b>FID-11_379177</b>	SeqNo: <b>5983856</b>		PrepDate: <b>04-Mar-2021</b>		DF: <b>2</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

nC6 to nC12	254.3	98	243.9	6.541	102	75 - 125	250.5	1.51	20	
>nC12 to nC28	1182	98	243.9	1346	-67.1	75 - 125	1245	5.22	20	SO
<i>Surr: 2-Fluorobiphenyl</i>	29.77	0	24.39	0	122	70 - 130	30.09	1.1	20	
<i>Surr: Trifluoromethyl benzene</i>	29.44	0	24.39	0	121	70 - 130	29.14	1.02	20	

The following samples were analyzed in this batch: HS21030092-03

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** 163198 ( 0 )      **Instrument:** FID-11      **Method:** LOW-LEVEL TEXAS TPH BY TX1005

<b>MBLK</b>		Sample ID: <b>MBLK-163198</b>		Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 17:22</b>				
Client ID:		Run ID: <b>FID-11_379257</b>		SeqNo: <b>5985855</b>		PrepDate: <b>08-Mar-2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	< 0.20	0.50								
>nC12 to nC28	< 0.20	0.50								
>nC28 to nC35	< 0.20	0.50								
Total Petroleum Hydrocarbon	< 0.20	0.50								
Surr: 2-Fluorobiphenyl	2.897	0	2.5	0	116	70 - 130				
Surr: Trifluoromethyl benzene	3.004	0	2.5	0	120	70 - 130				

<b>LCS</b>		Sample ID: <b>LCS-163198</b>		Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 17:51</b>				
Client ID:		Run ID: <b>FID-11_379257</b>		SeqNo: <b>5985856</b>		PrepDate: <b>08-Mar-2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	25.83	0.50	25	0	103	75 - 125				
>nC12 to nC28	28.11	0.50	25	0	112	75 - 125				
Surr: 2-Fluorobiphenyl	3.033	0	2.5	0	121	70 - 130				
Surr: Trifluoromethyl benzene	3.103	0	2.5	0	124	70 - 130				

<b>LCSD</b>		Sample ID: <b>LCSD-163198</b>		Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 18:21</b>				
Client ID:		Run ID: <b>FID-11_379257</b>		SeqNo: <b>5985857</b>		PrepDate: <b>08-Mar-2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	21.34	0.50	25	0	85.4	75 - 125	25.83	19.1	20	
>nC12 to nC28	23.71	0.50	25	0	94.9	75 - 125	28.11	17	20	
Surr: 2-Fluorobiphenyl	2.588	0	2.5	0	104	70 - 130	3.033	15.8	20	
Surr: Trifluoromethyl benzene	2.604	0	2.5	0	104	70 - 130	3.103	17.5	20	

<b>MS</b>		Sample ID: <b>HS21030215-01MS</b>		Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 19:20</b>				
Client ID:		Run ID: <b>FID-11_379257</b>		SeqNo: <b>5985859</b>		PrepDate: <b>08-Mar-2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	25.81	0.50	24.77	0	104	75 - 125				
>nC12 to nC28	29.34	0.50	24.77	0	118	75 - 125				
Surr: 2-Fluorobiphenyl	3.09	0	2.477	0	125	70 - 130				
Surr: Trifluoromethyl benzene	3.089	0	2.477	0	125	70 - 130				

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** 163198 ( 0 )      **Instrument:** FID-11      **Method:** LOW-LEVEL TEXAS TPH BY TX1005

<b>MSD</b>		Sample ID: <b>HS21030215-01MSD</b>			Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 19:49</b>			
Client ID:		Run ID: <b>FID-11_379257</b>			SeqNo: <b>5985860</b>		PrepDate: <b>08-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	23.86	0.50	24.75	0	96.4	75 - 125	25.81	7.85	20	
>nC12 to nC28	30.69	0.50	24.75	0	124	75 - 125	29.34	4.51	20	
<i>Surr: 2-Fluorobiphenyl</i>	2.792	0	2.475	0	113	70 - 130	3.09	10.2	20	
<i>Surr: Trifluoromethyl benzene</i>	2.801	0	2.475	0	113	70 - 130	3.089	9.77	20	

The following samples were analyzed in this batch: HS21030092-01      HS21030092-02

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> 163081 ( 0 )	<b>Instrument:</b> HG03	<b>Method:</b> MERCURY BY SW7471B
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<b>MBLK</b>	Sample ID: <b>MBLK-163081</b>	Units: <b>ug/Kg</b>	Analysis Date: <b>05-Mar-2021 09:22</b>							
Client ID:	Run ID: <b>HG03_379036</b>	SeqNo: <b>5980120</b>	PrepDate: <b>05-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury < 0.470 3.32

<b>LCS</b>	Sample ID: <b>LCS-163081</b>	Units: <b>ug/Kg</b>	Analysis Date: <b>05-Mar-2021 09:04</b>							
Client ID:	Run ID: <b>HG03_379036</b>	SeqNo: <b>5980113</b>	PrepDate: <b>05-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 366 3.32 333.3 0 110 80 - 120

<b>MS</b>	Sample ID: <b>HS21030086-03MS</b>	Units: <b>ug/Kg</b>	Analysis Date: <b>05-Mar-2021 09:09</b>							
Client ID:	Run ID: <b>HG03_379036</b>	SeqNo: <b>5980115</b>	PrepDate: <b>05-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 360.8 3.40 340.4 8.273 104 80 - 120

<b>MSD</b>	Sample ID: <b>HS21030086-03MSD</b>	Units: <b>ug/Kg</b>	Analysis Date: <b>05-Mar-2021 09:12</b>							
Client ID:	Run ID: <b>HG03_379036</b>	SeqNo: <b>5980116</b>	PrepDate: <b>05-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 359.5 3.43 344.4 8.273 102 80 - 120 360.8 0.357 20

The following samples were analyzed in this batch: HS21030092-03

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** 163176 ( 0 )      **Instrument:** ICPMS05      **Method:** ICP-MS METALS BY SW6020A

<b>MBLK</b>		Sample ID: <b>MBLK-163176</b>		Units: <b>mg/L</b>		Analysis Date: <b>05-Mar-2021 21:16</b>			
Client ID:		Run ID: <b>ICPMS05_379095</b>		SeqNo: <b>5983042</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	< 0.000400	0.00200							
Barium	< 0.00190	0.00400							
Cadmium	< 0.000200	0.00200							
Chromium	< 0.000400	0.00400							
Lead	< 0.000600	0.00200							
Selenium	< 0.00110	0.00200							
Silver	< 0.000200	0.00200							

<b>LCS</b>		Sample ID: <b>LCS-163176</b>		Units: <b>mg/L</b>		Analysis Date: <b>05-Mar-2021 21:18</b>			
Client ID:		Run ID: <b>ICPMS05_379095</b>		SeqNo: <b>5983043</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.05154	0.00200	0.05	0	103	80 - 120			
Barium	0.04782	0.00400	0.05	0	95.6	80 - 120			
Cadmium	0.04997	0.00200	0.05	0	99.9	80 - 120			
Chromium	0.04626	0.00400	0.05	0	92.5	80 - 120			
Lead	0.04174	0.00200	0.05	0	83.5	80 - 120			
Selenium	0.05556	0.00200	0.05	0	111	80 - 120			
Silver	0.04601	0.00200	0.05	0	92.0	80 - 120			

<b>MS</b>		Sample ID: <b>HS21021093-01MS</b>		Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 15:50</b>			
Client ID:		Run ID: <b>ICPMS05_379207</b>		SeqNo: <b>5984460</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Arsenic	0.05845	0.00200	0.05	0.001725	113	80 - 120			
Barium	0.1155	0.00400	0.05	0.06958	91.7	80 - 120			
Cadmium	0.04469	0.00200	0.05	0	89.4	80 - 120			
Chromium	0.04824	0.00400	0.05	0	96.5	80 - 120			
Lead	0.04166	0.00200	0.05	0	83.3	80 - 120			
Selenium	0.06095	0.00200	0.05	0.001842	118	80 - 120			

Revision: 1



**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

Batch ID: 163176 ( 0 )		Instrument: ICPMS05			Method: ICP-MS METALS BY SW6020A					
<b>MS</b>		Sample ID: <b>HS21021093-01MS</b>			Units: <b>mg/L</b>		Analysis Date: <b>05-Mar-2021 21:24</b>			
Client ID:		Run ID: <b>ICPMS05_379095</b>			SeqNo: <b>5983046</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	0.04338	0.00200	0.05	0.000048	86.7	80 - 120				
<b>MSD</b>		Sample ID: <b>HS21021093-01MSD</b>			Units: <b>mg/L</b>		Analysis Date: <b>05-Mar-2021 21:26</b>			
Client ID:		Run ID: <b>ICPMS05_379095</b>			SeqNo: <b>5983047</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.0572	0.00200	0.05	0.001725	111	80 - 120	0.06412	11.4	20	
Barium	0.1217	0.00400	0.05	0.06958	104	80 - 120	0.1232	1.25	20	
Cadmium	0.04822	0.00200	0.05	0.000052	96.3	80 - 120	0.04816	0.122	20	
Chromium	0.0489	0.00400	0.05	0.000107	97.6	80 - 120	0.05337	8.73	20	
Lead	0.04634	0.00200	0.05	0.000057	92.6	80 - 120	0.04571	1.37	20	
Silver	0.04305	0.00200	0.05	0.000048	86.0	80 - 120	0.04338	0.764	20	
<b>MSD</b>		Sample ID: <b>HS21021093-01MSD</b>			Units: <b>mg/L</b>		Analysis Date: <b>08-Mar-2021 16:52</b>			
Client ID:		Run ID: <b>ICPMS05_379207</b>			SeqNo: <b>5984472</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Selenium	0.05971	0.00200	0.05	0.001842	116	80 - 120	0.06944	15.1	20	
<b>PDS</b>		Sample ID: <b>HS21021093-01PDS</b>			Units: <b>mg/L</b>		Analysis Date: <b>05-Mar-2021 21:30</b>			
Client ID:		Run ID: <b>ICPMS05_379095</b>			SeqNo: <b>5983049</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1141	0.00200	0.1	0.001725	112	75 - 125				
Barium	0.1648	0.00400	0.1	0.06958	95.2	75 - 125				
Cadmium	0.09122	0.00200	0.1	0.000052	91.2	75 - 125				
Chromium	0.1032	0.00400	0.1	0.000107	103	75 - 125				
Lead	0.09391	0.00200	0.1	0.000057	93.9	75 - 125				
Selenium	0.1261	0.00200	0.1	0.001842	124	75 - 125				
Silver	0.09134	0.00200	0.1	0.000048	91.3	75 - 125				

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** 163176 ( 0 )      **Instrument:** ICPMS05      **Method:** ICP-MS METALS BY SW6020A

<b>SD</b>		Sample ID: <b>HS21021093-01SD</b>		Units: <b>mg/L</b>		Analysis Date: <b>05-Mar-2021 21:22</b>			
Client ID:		Run ID: <b>ICPMS05_379095</b>		SeqNo: <b>5983045</b>		PrepDate: <b>05-Mar-2021</b>		DF: <b>5</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Arsenic	< 0.00200	0.0100					0.001725	0	10
Barium	0.06854	0.0200					0.06958	1.49	10
Cadmium	< 0.00100	0.0100					0.000052	0	10
Chromium	< 0.00200	0.0200					0.000107	0	10
Lead	< 0.00300	0.0100					0.000057	0	10
Selenium	< 0.00550	0.0100					0.001842	0	10
Silver	< 0.00100	0.0100					0.000048	0	10

The following samples were analyzed in this batch: HS21030092-01      HS21030092-02

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> 163195 ( 0 )	<b>Instrument:</b> ICPMS06	<b>Method:</b> METALS BY SW6020A
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<b>MBLK</b>	Sample ID: <b>MBLK-163195</b>	Units: <b>mg/Kg</b>	Analysis Date: <b>09-Mar-2021 15:35</b>							
Client ID:	Run ID: <b>ICPMS06_379285</b>	SeqNo: <b>5986454</b>	PrepDate: <b>09-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Arsenic	< 0.0700	0.500								
Barium	< 0.0300	0.500								
Cadmium	< 0.0270	0.500								
Chromium	< 0.0230	0.500								
Lead	< 0.0130	0.500								
Selenium	< 0.0910	0.500								
Silver	< 0.0150	0.500								

<b>LCS</b>	Sample ID: <b>LCS-163195</b>	Units: <b>mg/Kg</b>	Analysis Date: <b>09-Mar-2021 15:37</b>							
Client ID:	Run ID: <b>ICPMS06_379285</b>	SeqNo: <b>5986455</b>	PrepDate: <b>09-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Arsenic	8.673	0.500	10	0	86.7	80 - 120				
Barium	8.423	0.500	10	0	84.2	80 - 120				
Cadmium	8.65	0.500	10	0	86.5	80 - 120				
Chromium	8.981	0.500	10	0	89.8	80 - 120				
Lead	8.271	0.500	10	0	82.7	80 - 120				
Selenium	8.713	0.500	10	0	87.1	80 - 120				
Silver	9.259	0.500	10	0	92.6	80 - 120				

<b>MS</b>	Sample ID: <b>HS21030183-39MS</b>	Units: <b>mg/Kg</b>	Analysis Date: <b>09-Mar-2021 15:43</b>							
Client ID:	Run ID: <b>ICPMS06_379285</b>	SeqNo: <b>5986458</b>	PrepDate: <b>09-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Arsenic	8.762	0.497	9.932	0.5087	83.1	75 - 125				
Barium	226.7	0.497	9.932	228.8	-21.6	75 - 125				SEO
Cadmium	8.579	0.497	9.932	0.01807	86.2	75 - 125				
Chromium	13.83	0.497	9.932	4.881	90.1	75 - 125				
Lead	10.48	0.497	9.932	1.829	87.1	75 - 125				
Selenium	8.457	0.497	9.932	0.07756	84.4	75 - 125				
Silver	9.278	0.497	9.932	0.01148	93.3	75 - 125				

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

Batch ID: 163195 ( 0 )		Instrument: ICPMS06			Method: METALS BY SW6020A					
<b>MSD</b>		Sample ID: <b>HS21030183-39MSD</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>09-Mar-2021 15:45</b>			
Client ID:		Run ID: <b>ICPMS06_379285</b>			SeqNo: <b>5986459</b>		PrepDate: <b>09-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.527	0.494	9.889	0.5087	81.1	75 - 125	8.762	2.72	20	
Barium	227.5	0.494	9.889	228.8	-13.2	75 - 125	226.7	0.372	20	SEO
Cadmium	8.496	0.494	9.889	0.01807	85.7	75 - 125	8.579	0.971	20	
Chromium	13.51	0.494	9.889	4.881	87.3	75 - 125	13.83	2.33	20	
Lead	10.54	0.494	9.889	1.829	88.1	75 - 125	10.48	0.641	20	
Selenium	8.422	0.494	9.889	0.07756	84.4	75 - 125	8.457	0.41	20	
Silver	9.144	0.494	9.889	0.01148	92.4	75 - 125	9.278	1.45	20	
<b>PDS</b>		Sample ID: <b>HS21030183-39PDS</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>09-Mar-2021 15:47</b>			
Client ID:		Run ID: <b>ICPMS06_379285</b>			SeqNo: <b>5986460</b>		PrepDate: <b>09-Mar-2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.207	0.499	9.982	0.5087	77.1	75 - 125				
Cadmium	7.964	0.499	9.982	0.01807	79.6	75 - 125				
Chromium	12.8	0.499	9.982	4.881	79.3	75 - 125				
Lead	10.08	0.499	9.982	1.829	82.6	75 - 125				
Selenium	8.071	0.499	9.982	0.07756	80.1	75 - 125				
Silver	8.552	0.499	9.982	0.01148	85.6	75 - 125				
<b>PDS</b>		Sample ID: <b>HS21030183-39PDS</b>			Units: <b>mg/Kg</b>		Analysis Date: <b>09-Mar-2021 16:37</b>			
Client ID:		Run ID: <b>ICPMS06_379285</b>			SeqNo: <b>5986472</b>		PrepDate: <b>09-Mar-2021</b>		DF: <b>20</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	421.4	9.98	199.6	233.6	94.1	75 - 125				

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

Batch ID: 163195 ( 0 )		Instrument: ICPMS06		Method: METALS BY SW6020A						
<b>SD</b>	Sample ID: <b>HS21030183-39SD</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>09-Mar-2021 15:41</b>						
Client ID:	Run ID: <b>ICPMS06_379285</b>	SeqNo: <b>5986457</b>		PrepDate: <b>09-Mar-2021</b>		DF: <b>5</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Arsenic	0.5278	2.50					0.5087	0	10	J
Cadmium	< 0.135	2.50					0.01807	0	10	
Chromium	4.902	2.50					4.881	0.444	10	
Lead	1.866	2.50					1.829	0	10	J
Selenium	< 0.454	2.50					0.07756	0	10	
Silver	< 0.0749	2.50					0.01148	0	10	
<b>SD</b>	Sample ID: <b>HS21030183-39SD</b>	Units: <b>mg/Kg</b>		Analysis Date: <b>09-Mar-2021 16:35</b>						
Client ID:	Run ID: <b>ICPMS06_379285</b>	SeqNo: <b>5986471</b>		PrepDate: <b>09-Mar-2021</b>		DF: <b>100</b>				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	231.4	49.9					233.6	0.927	10	

The following samples were analyzed in this batch: HS21030092-03

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** 163211 ( 0)      **Instrument:** HG03      **Method:** MERCURY BY SW7470A

<b>MBLK</b>	Sample ID: <b>MBLK-163211</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Mar-2021 14:34</b>				
Client ID:		Run ID: <b>HG03_379179</b>		SeqNo: <b>5983857</b>	PrepDate: <b>08-Mar-2021</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury < 0.0000300 0.000200

<b>LCS</b>	Sample ID: <b>LCS-163211</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Mar-2021 14:38</b>				
Client ID:		Run ID: <b>HG03_379179</b>		SeqNo: <b>5983858</b>	PrepDate: <b>08-Mar-2021</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00502 0.000200 0.005 0 100 80 - 120

<b>MS</b>	Sample ID: <b>HS21030097-01MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Mar-2021 14:42</b>				
Client ID:		Run ID: <b>HG03_379179</b>		SeqNo: <b>5983860</b>	PrepDate: <b>08-Mar-2021</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00553 0.000200 0.005 0.00028 105 75 - 125

<b>MSD</b>	Sample ID: <b>HS21030097-01MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>08-Mar-2021 14:45</b>				
Client ID:		Run ID: <b>HG03_379179</b>		SeqNo: <b>5983861</b>	PrepDate: <b>08-Mar-2021</b>	DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Mercury 0.00534 0.000200 0.005 0.00028 101 75 - 125 0.00553 3.5 20

The following samples were analyzed in this batch: HS21030092-01 HS21030092-02

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> 163382 ( 0 )	<b>Instrument:</b> ICPMS06	<b>Method:</b> TCLP METALS BY SW6020A
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<b>MBLK</b>	Sample ID: <b>MBLKT2-163382</b>	Units: <b>mg/L</b>	Analysis Date: <b>12-Mar-2021 12:49</b>							
Client ID:	Run ID: <b>ICPMS06_379555</b>	SeqNo: <b>5992556</b>	PrepDate: <b>11-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Barium	< 0.0190	0.200								
Chromium	< 0.00400	0.0500								
Lead	< 0.00600	0.0500								

<b>MBLK</b>	Sample ID: <b>MBLKT1-163382</b>	Units: <b>mg/L</b>	Analysis Date: <b>12-Mar-2021 12:47</b>							
Client ID:	Run ID: <b>ICPMS06_379555</b>	SeqNo: <b>5992555</b>	PrepDate: <b>11-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Barium	< 0.0190	0.200								
Chromium	< 0.00400	0.0500								
Lead	< 0.00600	0.0500								

<b>MBLK</b>	Sample ID: <b>MBLK-163382</b>	Units: <b>mg/L</b>	Analysis Date: <b>12-Mar-2021 12:45</b>							
Client ID:	Run ID: <b>ICPMS06_379555</b>	SeqNo: <b>5992554</b>	PrepDate: <b>11-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Barium	< 0.00190	0.0200								
Chromium	< 0.000400	0.00500								
Lead	< 0.000600	0.00500								

<b>LCS</b>	Sample ID: <b>LCS-163382</b>	Units: <b>mg/L</b>	Analysis Date: <b>12-Mar-2021 12:51</b>							
Client ID:	Run ID: <b>ICPMS06_379555</b>	SeqNo: <b>5992557</b>	PrepDate: <b>11-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Barium	0.05276	0.0200	0.05	0	106	80 - 120				
Chromium	0.04952	0.00500	0.05	0	99.0	80 - 120				
Lead	0.05078	0.00500	0.05	0	102	80 - 120				

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

Batch ID: 163382 ( 0 )		Instrument: ICPMS06			Method: TCLP METALS BY SW6020A					
<b>MS</b>		Sample ID: HS21030303-01MS			Units: mg/L		Analysis Date: 12-Mar-2021 13:05			
Client ID:		Run ID: ICPMS06_379555			SeqNo: 5992546		PrepDate: 11-Mar-2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.949	0.200	0.5	0.4494	99.9	80 - 120				
Chromium	0.4923	0.0500	0.5	0.02996	92.5	80 - 120				
Lead	25.07	0.0500	0.5	24.85	44.4	80 - 120				SEO
<b>MSD</b>		Sample ID: HS21030303-01MSD			Units: mg/L		Analysis Date: 12-Mar-2021 13:07			
Client ID:		Run ID: ICPMS06_379555			SeqNo: 5992547		PrepDate: 11-Mar-2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.9316	0.200	0.5	0.4494	96.4	80 - 120	0.949	1.85	20	
Chromium	0.4767	0.0500	0.5	0.02996	89.4	80 - 120	0.4923	3.22	20	
Lead	24.03	0.0500	0.5	24.85	-165	80 - 120	25.07	4.26	20	SEO
<b>PDS</b>		Sample ID: HS21030303-01PDS			Units: mg/L		Analysis Date: 12-Mar-2021 13:09			
Client ID:		Run ID: ICPMS06_379555			SeqNo: 5992548		PrepDate: 11-Mar-2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium	1.199	0.0500	1	0.02996	117	75 - 125				
<b>PDS</b>		Sample ID: HS21030303-01PDS			Units: mg/L		Analysis Date: 12-Mar-2021 14:55			
Client ID:		Run ID: ICPMS06_379555			SeqNo: 5992837		PrepDate: 11-Mar-2021		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	44.17	1.00	20	22.95	106	75 - 125				
<b>SD</b>		Sample ID: HS21030303-01SD			Units: mg/L		Analysis Date: 12-Mar-2021 13:03			
Client ID:		Run ID: ICPMS06_379555			SeqNo: 5992545		PrepDate: 11-Mar-2021		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Barium	0.4445	1.00					0.4494	0	10	J
Chromium	< 0.0200	0.250					0.02996	0	10	

Revision: 1



**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** 163382 ( 0 )      **Instrument:** ICPMS06      **Method:** TCLP METALS BY SW6020A

<b>SD</b>	Sample ID: <b>HS21030303-01SD</b>	Units: <b>mg/L</b>	Analysis Date: <b>12-Mar-2021 14:52</b>						
Client ID:	Run ID: <b>ICPMS06_379555</b>	SeqNo: <b>5992836</b>	PrepDate: <b>11-Mar-2021</b> DF: <b>100</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual

Lead	22.96	5.00					22.95	0.0655	10
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The following samples were analyzed in this batch:

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** R378961 ( 0 )      **Instrument:** VOA4      **Method:** LOW LEVEL VOLATILES BY SW8260C

<b>MBLK</b>		Sample ID: <b>VBLKW-210303</b>		Units: <b>ug/L</b>		Analysis Date: <b>03-Mar-2021 23:03</b>			
Client ID:		Run ID: <b>VOA4_378961</b>		SeqNo: <b>5978138</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	< 0.20	1.0							
Ethylbenzene	< 0.30	1.0							
Naphthalene	< 0.30	1.0							
Toluene	< 0.20	1.0							
Xylenes, Total	< 0.30	1.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	52.14	1.0	50	0	104	70 - 123			
<i>Surr: 4-Bromofluorobenzene</i>	47.9	1.0	50	0	95.8	82 - 115			
<i>Surr: Dibromofluoromethane</i>	50.39	1.0	50	0	101	73 - 126			
<i>Surr: Toluene-d8</i>	49.04	1.0	50	0	98.1	81 - 120			

<b>LCS</b>		Sample ID: <b>VLCSW-210303</b>		Units: <b>ug/L</b>		Analysis Date: <b>03-Mar-2021 22:21</b>			
Client ID:		Run ID: <b>VOA4_378961</b>		SeqNo: <b>5978137</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	18.53	1.0	20	0	92.7	74 - 120			
Ethylbenzene	15.69	1.0	20	0	78.5	77 - 117			
Naphthalene	17.95	1.0	20	0	89.8	70 - 130			
Toluene	17.52	1.0	20	0	87.6	77 - 118			
Xylenes, Total	49.33	1.0	60	0	82.2	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	49.95	1.0	50	0	99.9	70 - 123			
<i>Surr: 4-Bromofluorobenzene</i>	49.96	1.0	50	0	99.9	82 - 115			
<i>Surr: Dibromofluoromethane</i>	48.21	1.0	50	0	96.4	73 - 126			
<i>Surr: Toluene-d8</i>	49.62	1.0	50	0	99.2	81 - 120			

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** R378961 ( 0 )      **Instrument:** VOA4      **Method:** LOW LEVEL VOLATILES BY SW8260C

<b>MS</b>		Sample ID: <b>HS21030096-09MS</b>		Units: <b>ug/L</b>		Analysis Date: <b>04-Mar-2021 00:27</b>			
Client ID:		Run ID: <b>VOA4_378961</b>		SeqNo: <b>5978142</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	20.76	1.0	20	0.621	101	70 - 127			
Ethylbenzene	21.05	1.0	20	0	105	70 - 124			
Naphthalene	18.46	1.0	20	0	92.3	70 - 130			
Toluene	21.29	1.0	20	0	106	70 - 123			
Xylenes, Total	63.77	1.0	60	0	106	70 - 130			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>49.87</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.7</i>	<i>70 - 126</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.65</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.3</i>	<i>81 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>50.78</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>77 - 123</i>			
<i>Surr: Toluene-d8</i>	<i>49.93</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.9</i>	<i>82 - 127</i>			

<b>MSD</b>		Sample ID: <b>HS21030096-09MSD</b>		Units: <b>ug/L</b>		Analysis Date: <b>04-Mar-2021 00:47</b>			
Client ID:		Run ID: <b>VOA4_378961</b>		SeqNo: <b>5978143</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	19.88	1.0	20	0.621	96.3	70 - 127	20.76	4.38	20
Ethylbenzene	20.42	1.0	20	0	102	70 - 124	21.05	3.05	20
Naphthalene	20.73	1.0	20	0	104	70 - 130	18.46	11.5	20
Toluene	20.19	1.0	20	0	101	70 - 123	21.29	5.31	20
Xylenes, Total	60.15	1.0	60	0	100	70 - 130	63.77	5.85	20
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>51.42</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>70 - 126</i>	<i>49.87</i>	<i>3.05</i>	<i>20</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>48.87</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>97.7</i>	<i>81 - 113</i>	<i>49.65</i>	<i>1.59</i>	<i>20</i>
<i>Surr: Dibromofluoromethane</i>	<i>50.6</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>77 - 123</i>	<i>50.78</i>	<i>0.363</i>	<i>20</i>
<i>Surr: Toluene-d8</i>	<i>49.33</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>98.7</i>	<i>82 - 127</i>	<i>49.93</i>	<i>1.2</i>	<i>20</i>

The following samples were analyzed in this batch: HS21030092-01      HS21030092-02

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> R379169 ( 0 )		<b>Instrument:</b> VOA8		<b>Method:</b> VOLATILES BY SW8260C					
<b>MBLK</b>	Sample ID: <b>VBLKS1-030821</b>	Units: <b>ug/Kg</b>			Analysis Date: <b>08-Mar-2021 12:54</b>				
Client ID:	Run ID: <b>VOA8_379169</b>	SeqNo: <b>5983601</b>		PrepDate:			DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	< 0.50	5.0							
Ethylbenzene	< 0.70	5.0							
Naphthalene	< 0.80	5.0							
Toluene	< 0.60	5.0							
Xylenes, Total	< 1.0	5.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	47.62	0	50	0	95.2	76 - 125			
<i>Surr: 4-Bromofluorobenzene</i>	48.97	0	50	0	97.9	80 - 120			
<i>Surr: Dibromofluoromethane</i>	49.52	0	50	0	99.0	80 - 119			
<i>Surr: Toluene-d8</i>	50.62	0	50	0	101	81 - 118			

<b>LCS</b>	Sample ID: <b>VLCSS1-030821</b>	Units: <b>ug/Kg</b>			Analysis Date: <b>08-Mar-2021 12:08</b>				
Client ID:	Run ID: <b>VOA8_379169</b>	SeqNo: <b>5983600</b>		PrepDate:			DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	49.5	5.0	50	0	99.0	75 - 124			
Ethylbenzene	50.38	5.0	50	0	101	70 - 123			
Naphthalene	45.88	5.0	50	0	91.8	71 - 128			
Toluene	49.4	5.0	50	0	98.8	76 - 122			
Xylenes, Total	152.4	5.0	150	0	102	77 - 128			
<i>Surr: 1,2-Dichloroethane-d4</i>	50.38	0	50	0	101	76 - 125			
<i>Surr: 4-Bromofluorobenzene</i>	52.33	0	50	0	105	80 - 120			
<i>Surr: Dibromofluoromethane</i>	51.1	0	50	0	102	80 - 119			
<i>Surr: Toluene-d8</i>	50.48	0	50	0	101	81 - 118			

Revision: 1

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> R379169 ( 0 )		<b>Instrument:</b> VOA8		<b>Method:</b> VOLATILES BY SW8260C					
<b>MS</b>	Sample ID: <b>HS21030124-23MS</b>	Units: <b>ug/Kg</b>			Analysis Date: <b>08-Mar-2021 15:57</b>				
Client ID:	Run ID: <b>VOA8_379169</b>	SeqNo: <b>5984703</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	29.83	3.7	37	0	80.6	70 - 130			
Ethylbenzene	27.89	3.7	37	0	75.4	70 - 130			
Naphthalene	25.23	3.7	37	0	68.2	70 - 130			S
Toluene	28.18	3.7	37	0	76.2	70 - 130			
Xylenes, Total	83.28	3.7	111	0	75.0	70 - 130			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>39.31</i>	<i>0</i>	<i>37</i>	<i>0</i>	<i>106</i>	<i>70 - 126</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>37.88</i>	<i>0</i>	<i>37</i>	<i>0</i>	<i>102</i>	<i>70 - 130</i>			
<i>Surr: Dibromofluoromethane</i>	<i>38.62</i>	<i>0</i>	<i>37</i>	<i>0</i>	<i>104</i>	<i>70 - 130</i>			
<i>Surr: Toluene-d8</i>	<i>36.69</i>	<i>0</i>	<i>37</i>	<i>0</i>	<i>99.2</i>	<i>70 - 130</i>			

<b>MSD</b>	Sample ID: <b>HS21030124-23MSD</b>	Units: <b>ug/Kg</b>			Analysis Date: <b>08-Mar-2021 16:19</b>				
Client ID:	Run ID: <b>VOA8_379169</b>	SeqNo: <b>5984704</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	42.13	4.0	39.5	0	107	70 - 130	29.83	34.2	30	R
Ethylbenzene	39.28	4.0	39.5	0	99.4	70 - 130	27.89	33.9	30	R
Naphthalene	38.48	4.0	39.5	0	97.4	70 - 130	25.23	41.6	30	R
Toluene	39.71	4.0	39.5	0	101	70 - 130	28.18	34	30	R
Xylenes, Total	119	4.0	118.5	0	100	70 - 130	83.28	35.3	30	R
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>41.96</i>	<i>0</i>	<i>39.5</i>	<i>0</i>	<i>106</i>	<i>70 - 126</i>	<i>39.31</i>	<i>6.51</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>40.01</i>	<i>0</i>	<i>39.5</i>	<i>0</i>	<i>101</i>	<i>70 - 130</i>	<i>37.88</i>	<i>5.47</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>41.16</i>	<i>0</i>	<i>39.5</i>	<i>0</i>	<i>104</i>	<i>70 - 130</i>	<i>38.62</i>	<i>6.36</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>38.28</i>	<i>0</i>	<i>39.5</i>	<i>0</i>	<i>96.9</i>	<i>70 - 130</i>	<i>36.69</i>	<i>4.22</i>	<i>30</i>	

The following samples were analyzed in this batch: HS21030092-03

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> 163103 ( 0 )	<b>Instrument:</b> UV-2450	<b>Method:</b> CYANIDE - SW9014
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<b>MBLK</b>	Sample ID: <b>MBLK-163103</b>	Units: <b>mg/L</b>	Analysis Date: <b>04-Mar-2021 15:40</b>							
Client ID:	Run ID: <b>UV-2450_379046</b>	SeqNo: <b>5980205</b>	PrepDate: <b>04-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Cyanide < 0.00200 0.00500

<b>LCS</b>	Sample ID: <b>LCS-163103</b>	Units: <b>mg/L</b>	Analysis Date: <b>04-Mar-2021 15:40</b>							
Client ID:	Run ID: <b>UV-2450_379046</b>	SeqNo: <b>5980204</b>	PrepDate: <b>04-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Cyanide 0.196 0.00500 0.2 0 98.0 80 - 120

<b>MS</b>	Sample ID: <b>HS21030088-01MS</b>	Units: <b>mg/L</b>	Analysis Date: <b>04-Mar-2021 15:40</b>							
Client ID:	Run ID: <b>UV-2450_379046</b>	SeqNo: <b>5980202</b>	PrepDate: <b>04-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Cyanide 0.194 0.00500 0.2 0.007 93.5 80 - 120

<b>MSD</b>	Sample ID: <b>HS21030088-01MSD</b>	Units: <b>mg/L</b>	Analysis Date: <b>04-Mar-2021 15:40</b>							
Client ID:	Run ID: <b>UV-2450_379046</b>	SeqNo: <b>5980203</b>	PrepDate: <b>04-Mar-2021</b> DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Cyanide 0.178 0.00500 0.2 0.007 85.5 80 - 120 0.194 8.6 20

The following samples were analyzed in this batch: 

HS21030092-01	HS21030092-02
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**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

**Batch ID:** R378900 ( 0 )      **Instrument:** WetChem\_HS      **Method:** SULFIDE BY SM4500 S2-F

<b>MBLK</b>	Sample ID: <b>MBLK-R378900</b>	Units: <b>mg/L</b>		Analysis Date: <b>03-Mar-2021 10:00</b>						
Client ID:	Run ID: <b>WetChem_HS_378900</b>	SeqNo: <b>5976438</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Sulfide      < 1.00      1.00

<b>LCS</b>	Sample ID: <b>LCS-R378900</b>	Units: <b>mg/L</b>		Analysis Date: <b>03-Mar-2021 10:00</b>						
Client ID:	Run ID: <b>WetChem_HS_378900</b>	SeqNo: <b>5976437</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Sulfide      23.08      1.00      25      0      92.3      85 - 115

<b>LCSD</b>	Sample ID: <b>LCSD-R378900</b>	Units: <b>mg/L</b>		Analysis Date: <b>03-Mar-2021 10:00</b>						
Client ID:	Run ID: <b>WetChem_HS_378900</b>	SeqNo: <b>5976436</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Sulfide      23.28      1.00      25      0      93.1      85 - 115      23.08      0.863      20

<b>MS</b>	Sample ID: <b>HS21030092-01MS</b>	Units: <b>mg/L</b>		Analysis Date: <b>03-Mar-2021 10:00</b>						
Client ID: <b>WW-1620-IDW01-20210302</b>	Run ID: <b>WetChem_HS_378900</b>	SeqNo: <b>5976439</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Sulfide      23.28      1.00      25      -1.32      98.4      80 - 120

The following samples were analyzed in this batch: HS21030092-01      HS21030092-02

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> R378987 ( 0 )		<b>Instrument:</b> WetChem_HS		<b>Method:</b> PH BY SM4500H+ B						
<b>DUP</b>	Sample ID: <b>HS21020899-01DUP</b>	Units: <b>pH Units</b>		Analysis Date: <b>04-Mar-2021 12:17</b>						
Client ID:	Run ID: <b>WetChem_HS_378987</b>	SeqNo: <b>5978713</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.28	0.100					7.21	0.966	10	
Temp Deg C @pH	22.8	0					22.8	0	10	

The following samples were analyzed in this batch: HS21030092-01      HS21030092-02



**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**QC BATCH REPORT**

<b>Batch ID:</b> R379197 ( 0 )		<b>Instrument:</b> WetChem_HS		<b>Method:</b> FLASH POINT BY PENSKY-MARTENS SW1010A					
<b>LCS</b>	Sample ID: <b>LCS-R379197</b>	Units: °F			Analysis Date: <b>08-Mar-2021 08:00</b>				
Client ID:	Run ID: <b>WetChem_HS_379197</b>	SeqNo: <b>5984234</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ignitability 79.99 70.0 81 0 98.8 95 - 105

<b>DUP</b>		Sample ID: <b>HS21030332-01DUP</b>		Units: °F			Analysis Date: <b>08-Mar-2021 08:00</b>		
Client ID:	Run ID: <b>WetChem_HS_379197</b>	SeqNo: <b>5984235</b>	PrepDate:	DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ignitability > 212 70.0 0 0 20

The following samples were analyzed in this batch: HS21030092-01 HS21030092-02

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**WorkOrder:** HS21030092

**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>
Date	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

<b>Agency</b>	<b>Number</b>	<b>Expire Date</b>
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
North Dakota	R-193 2020-2021	30-Apr-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-20-26	30-Apr-2021

**Client:** Golder Associates Inc.  
**Project:** Houston TX-Wood Preserving Works IDW  
**Work Order:** HS21030092

**SAMPLE TRACKING**

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Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	MET023
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	EXT129
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	WET245
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	WET245
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	WET245
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	VOA235
HS21030092-01	WW-1620-IDW01-20210302	Login	3/2/2021 4:05:38 PM	JRM	TPH029

Sample Receipt Checklist

Work Order ID: HS21030092

Date/Time Received: 02-Mar-2021 13:35

Client Name: PBW

Received by: Jared R. Makan

Completed By: /S/ Jared R. Makan	02-Mar-2021 16:13	Reviewed by: /S/ Dane J. Wacasey	04-Mar-2021 08:28
eSignature	Date/Time	eSignature	Date/Time

Matrices: **Water, Sludge**

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
- VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes  No  Not Present
- Chain of custody present? Yes  No  1 Page(s)
- Chain of custody signed when relinquished and received? Yes  No  COC IDs:234162
- Samplers name present on COC? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- 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):	4.4°C UC/C	IR25
Cooler(s)/Kit(s):	45907	
Date/Time sample(s) sent to storage:	03/02/2021 16:15	

- 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:

Client Contacted: Golder Assocaites Date Contacted: 4-Mar-2021 Person Contacted: Michelle Hermiston

Contacted By: 369 Regarding: Turnarond time

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 \_\_\_\_ of \_\_\_\_

COC ID: 234162

## HS21030092

Golder Associates Inc.  
Houston TX-Wood Preserving Works IDW



ALS Project Manager:

Customer Information		Project Information	
Purchase Order	UPRR/Kevin Peterburs 1620-23	Project Name	Houston TX-Wood Preserving Works IDW
Work Order		Project Number	1620-23-Rev0 SR 92683
Company Name	Golder Associates Inc.	Bill To Company	Union Pacific Railroad- A/P
Send Report To	Eric Matzner	Invoice Attn	Accounts Payable
Address	2201 Double Creek Drive	Address	1400 Douglas Street
	Suite 4004		Stop 0750
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha NE 681790750
Phone	(512) 671-3434	Phone	
Fax	(512) 671-3445	Fax	
e-Mail Address	Eric_Matzner@golder.com	e-Mail Address	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	WW 1620 IDW 01 20210302	3-2-21	11:00	W		11	X	X	X	X	X	X	X				
2	WW 1620 IDW 02 20210302	3-2-21	11:30	W		11	X	X	X	X	X	X	X				
3	SO 1620 IDW 02 20210302	3-2-21	12:00	S		4								X	X	X	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

ADD TCLP

Sampler(s) Please Print & Sign <i>[Signature]</i>		Shipment Method		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> 7				Results Due Date:		
Relinquished by: <i>[Signature]</i>		Date: 3-2-21	Time: 13:35	Received by: <i>[Signature]</i>		Notes: UPRR HWPW 1620-23 WR# 003866				
Relinquished by: <i>[Signature]</i>		Date: 3/2/21	Time: 13:35	Received by (Laboratory): <i>[Signature]</i>		Cooler ID: 45907	Cooler Temp: 4.4°C	QC Package: (Check One Box Below)		
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		<input checked="" type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRRP Checklist			
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						<input type="checkbox"/> Level III Std QC/Faw Date	<input type="checkbox"/> TRRP Level IV			
						<input type="checkbox"/> Level IV SW846/CLP	<input type="checkbox"/> Other			

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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