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June 19, 2019

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

Work Order: **HS19051772**

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

Dear Eric,

ALS Environmental received 1 sample(s) on May 29, 2019 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: COREY.GRANDITS
Dane J. Wacasey

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
Work Order: HS19051772

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS19051772-01	WG-1620-IDW-W-20190529	Water		29-May-2019 11:35	29-May-2019 14:55	<input type="checkbox"/>

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
Work Order: HS19051772

CASE NARRATIVE

Work Order Comments

- Revision I - This report was revised to report Antimony, Beryllium, and Nickel; originally reported RCRA 8 metals only.

Work Order Comments

- 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: 141387****Sample ID: LCSD-141387**

- LCSD RPD was above the upper control limit. The individual recoveries were in control. (>nC12 to nC28)

GCMS Semivolatiles by Method SW8270**Batch ID: 141401**

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

GCMS Volatiles by Method SW8260**Batch ID: R339533**

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

Metals by Method SW7470**Batch ID: 141540**

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

Metals by Method SW6020**Batch ID: 141478****Sample ID: HS19051850-03MS**

- MS and MSD are for an unrelated sample

WetChemistry by Method SW1010**Batch ID: R339969**

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

WetChemistry by Method SM4500 S2-F**Batch ID: R339744**

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

WetChemistry by Method SW9040C**Batch ID: R339672**

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

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
Work Order: HS19051772

CASE NARRATIVE

WetChemistry by Method SW9040C

WetChemistry by Method SW9014

Batch ID: 141461

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works
 Sample ID: WG-1620-IDW-W-20190529
 Collection Date: 29-May-2019 11:35

ANALYTICAL REPORT
 WorkOrder:HS19051772
 Lab ID:HS19051772-01
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: PC			
Benzene	U		0.00020	0.0010	mg/L	1	30-May-2019 17:05
Ethylbenzene	U		0.00030	0.0010	mg/L	1	30-May-2019 17:05
Toluene	U		0.00020	0.0010	mg/L	1	30-May-2019 17:05
Xylenes, Total	U		0.00030	0.0010	mg/L	1	30-May-2019 17:05
Surr: 1,2-Dichloroethane-d4	88.1			70-126	%REC	1	30-May-2019 17:05
Surr: 4-Bromofluorobenzene	104			81-113	%REC	1	30-May-2019 17:05
Surr: Dibromofluoromethane	91.3			77-123	%REC	1	30-May-2019 17:05
Surr: Toluene-d8	103			82-127	%REC	1	30-May-2019 17:05

Client: Golder Associates Inc.
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ANALYTICAL REPORT
 WorkOrder:HS19051772
 Lab ID:HS19051772-01
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		Method:SW8270		Prep:SW3510 / 30-May-2019		Analyst: GEY	
1,2,4-Trichlorobenzene	U		0.000030	0.00020	mg/L	1	01-Jun-2019 19:32
2,4,5-Trichlorophenol	U		0.000057	0.00020	mg/L	1	01-Jun-2019 19:32
2,4,6-Trichlorophenol	U		0.000048	0.00020	mg/L	1	01-Jun-2019 19:32
2,4-Dichlorophenol	U		0.000043	0.00020	mg/L	1	01-Jun-2019 19:32
2,4-Dimethylphenol	U		0.000040	0.00020	mg/L	1	01-Jun-2019 19:32
2,4-Dinitrophenol	U		0.00010	0.0010	mg/L	1	01-Jun-2019 19:32
2,4-Dinitrotoluene	U		0.000058	0.00020	mg/L	1	01-Jun-2019 19:32
2,6-Dinitrotoluene	U		0.000042	0.00020	mg/L	1	01-Jun-2019 19:32
2-Chloronaphthalene	U		0.000021	0.00020	mg/L	1	01-Jun-2019 19:32
2-Chlorophenol	U		0.000036	0.00020	mg/L	1	01-Jun-2019 19:32
2-Methylnaphthalene	0.000029	J	0.000019	0.00010	mg/L	1	01-Jun-2019 19:32
2-Methylphenol	U		0.000045	0.00020	mg/L	1	01-Jun-2019 19:32
2-Nitroaniline	U		0.000041	0.00020	mg/L	1	01-Jun-2019 19:32
2-Nitrophenol	U		0.000034	0.00020	mg/L	1	01-Jun-2019 19:32
3&4-Methylphenol	U		0.000036	0.00020	mg/L	1	01-Jun-2019 19:32
3,3'-Dichlorobenzidine	U		0.000044	0.00020	mg/L	1	01-Jun-2019 19:32
3-Nitroaniline	U		0.000049	0.00020	mg/L	1	01-Jun-2019 19:32
4,6-Dinitro-2-methylphenol	U		0.000020	0.00020	mg/L	1	01-Jun-2019 19:32
4-Bromophenyl phenyl ether	U		0.000051	0.00020	mg/L	1	01-Jun-2019 19:32
4-Chloro-3-methylphenol	U		0.000032	0.00020	mg/L	1	01-Jun-2019 19:32
4-Chloroaniline	U		0.000039	0.00020	mg/L	1	01-Jun-2019 19:32
4-Chlorophenyl phenyl ether	U		0.000044	0.00020	mg/L	1	01-Jun-2019 19:32
4-Nitroaniline	U		0.000035	0.00020	mg/L	1	01-Jun-2019 19:32
4-Nitrophenol	U		0.000047	0.0010	mg/L	1	01-Jun-2019 19:32
Acenaphthene	U		0.000027	0.00010	mg/L	1	01-Jun-2019 19:32
Acenaphthylene	U		0.000015	0.00010	mg/L	1	01-Jun-2019 19:32
Anthracene	U		0.000014	0.00010	mg/L	1	01-Jun-2019 19:32
Benz(a)anthracene	U		0.000050	0.00010	mg/L	1	01-Jun-2019 19:32
Benzidine	U		0.00010	0.00020	mg/L	1	01-Jun-2019 19:32
Benzo(a)pyrene	U		0.000020	0.00010	mg/L	1	01-Jun-2019 19:32
Benzo(b)fluoranthene	U		0.000023	0.00010	mg/L	1	01-Jun-2019 19:32
Benzo(g,h,i)perylene	U		0.000014	0.00010	mg/L	1	01-Jun-2019 19:32
Benzo(k)fluoranthene	U		0.000019	0.00010	mg/L	1	01-Jun-2019 19:32
Benzyl alcohol	0.00017	J	0.000054	0.00020	mg/L	1	01-Jun-2019 19:32
Bis(2-chloroethoxy)methane	U		0.000030	0.00020	mg/L	1	01-Jun-2019 19:32
Bis(2-chloroethyl)ether	U		0.000026	0.00020	mg/L	1	01-Jun-2019 19:32
Bis(2-chloroisopropyl)ether	U		0.000070	0.00020	mg/L	1	01-Jun-2019 19:32
Bis(2-ethylhexyl)phthalate	0.00014	J	0.000037	0.00020	mg/L	1	01-Jun-2019 19:32
Butyl benzyl phthalate	U		0.000019	0.00020	mg/L	1	01-Jun-2019 19:32

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

Revision: 1

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works
 Sample ID: WG-1620-IDW-W-20190529
 Collection Date: 29-May-2019 11:35

ANALYTICAL REPORT
 WorkOrder:HS19051772
 Lab ID:HS19051772-01
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		Method:SW8270		Prep:SW3510 / 30-May-2019		Analyst: GEY	
Carbazole	U		0.000025	0.00020	mg/L	1	01-Jun-2019 19:32
Chrysene	U		0.000021	0.00010	mg/L	1	01-Jun-2019 19:32
Di-n-butyl phthalate	U		0.000020	0.00020	mg/L	1	01-Jun-2019 19:32
Di-n-octyl phthalate	U		0.000020	0.00020	mg/L	1	01-Jun-2019 19:32
Dibenz(a,h)anthracene	U		0.000024	0.00010	mg/L	1	01-Jun-2019 19:32
Dibenzofuran	U		0.000020	0.00010	mg/L	1	01-Jun-2019 19:32
Diethyl phthalate	U		0.000030	0.00020	mg/L	1	01-Jun-2019 19:32
Dimethyl phthalate	U		0.000041	0.00020	mg/L	1	01-Jun-2019 19:32
Fluoranthene	U		0.000010	0.00010	mg/L	1	01-Jun-2019 19:32
Fluorene	U		0.000030	0.00010	mg/L	1	01-Jun-2019 19:32
Hexachlorobenzene	U		0.000044	0.00020	mg/L	1	01-Jun-2019 19:32
Hexachlorobutadiene	U		0.000030	0.00020	mg/L	1	01-Jun-2019 19:32
Hexachlorocyclopentadiene	U		0.000030	0.00020	mg/L	1	01-Jun-2019 19:32
Hexachloroethane	U		0.000059	0.00020	mg/L	1	01-Jun-2019 19:32
Indeno(1,2,3-cd)pyrene	U		0.000022	0.00010	mg/L	1	01-Jun-2019 19:32
Isophorone	U		0.000025	0.00020	mg/L	1	01-Jun-2019 19:32
N-Nitrosodi-n-propylamine	U		0.000032	0.00020	mg/L	1	01-Jun-2019 19:32
N-Nitrosodimethylamine	U		0.000010	0.00020	mg/L	1	01-Jun-2019 19:32
N-Nitrosodiphenylamine	U		0.000025	0.00020	mg/L	1	01-Jun-2019 19:32
Naphthalene	0.000038	J	0.000020	0.00010	mg/L	1	01-Jun-2019 19:32
Nitrobenzene	U		0.000024	0.00020	mg/L	1	01-Jun-2019 19:32
Pentachlorophenol	U		0.000079	0.00020	mg/L	1	01-Jun-2019 19:32
Phenanthrene	U		0.000021	0.00010	mg/L	1	01-Jun-2019 19:32
Phenol	0.00017	J	0.000035	0.00020	mg/L	1	01-Jun-2019 19:32
Pyrene	U		0.000019	0.00010	mg/L	1	01-Jun-2019 19:32
Pyridine	U		0.000030	0.0010	mg/L	1	01-Jun-2019 19:32
<i>Surr: 2,4,6-Tribromophenol</i>	<i>96.7</i>			<i>34-129</i>	<i>%REC</i>	<i>1</i>	<i>01-Jun-2019 19:32</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>69.6</i>			<i>40-125</i>	<i>%REC</i>	<i>1</i>	<i>01-Jun-2019 19:32</i>
<i>Surr: 2-Fluorophenol</i>	<i>60.1</i>			<i>20-120</i>	<i>%REC</i>	<i>1</i>	<i>01-Jun-2019 19:32</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>104</i>			<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>01-Jun-2019 19:32</i>
<i>Surr: Nitrobenzene-d5</i>	<i>62.4</i>			<i>41-120</i>	<i>%REC</i>	<i>1</i>	<i>01-Jun-2019 19:32</i>
<i>Surr: Phenol-d6</i>	<i>63.5</i>			<i>20-120</i>	<i>%REC</i>	<i>1</i>	<i>01-Jun-2019 19:32</i>
LOW-LEVEL TEXAS TPH BY TX1005		Method:TX1005		Prep:TX1005PR / 29-May-2019		Analyst: MBG	
nC6 to nC12	U		0.20	0.49	mg/L	1	31-May-2019 04:34
>nC12 to nC28	U		0.20	0.49	mg/L	1	31-May-2019 04:34
>nC28 to nC35	U		0.20	0.49	mg/L	1	31-May-2019 04:34
Total Petroleum Hydrocarbon	U		0.20	0.49	mg/L	1	31-May-2019 04:34
<i>Surr: 2-Fluorobiphenyl</i>	<i>107</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>31-May-2019 04:34</i>
<i>Surr: Trifluoromethyl benzene</i>	<i>111</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>31-May-2019 04:34</i>

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

Revision: 1

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works
 Sample ID: WG-1620-IDW-W-20190529
 Collection Date: 29-May-2019 11:35

ANALYTICAL REPORT
 WorkOrder:HS19051772
 Lab ID:HS19051772-01
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	ML	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 31-May-2019		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	01-Jun-2019 00:11
Arsenic	0.000618	J	0.000400	0.00200	mg/L	1	01-Jun-2019 00:11
Barium	0.0920		0.00190	0.00400	mg/L	1	01-Jun-2019 00:11
Beryllium	U		0.000200	0.00200	mg/L	1	01-Jun-2019 00:11
Cadmium	U		0.000200	0.00200	mg/L	1	01-Jun-2019 00:11
Chromium	0.000409	J	0.000400	0.00400	mg/L	1	01-Jun-2019 00:11
Lead	U		0.000600	0.00200	mg/L	1	01-Jun-2019 00:11
Nickel	0.00137	J	0.000600	0.00200	mg/L	1	01-Jun-2019 00:11
Selenium	U		0.00110	0.00200	mg/L	1	01-Jun-2019 00:11
Silver	U		0.000200	0.00200	mg/L	1	01-Jun-2019 00:11
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 03-Jun-2019		Analyst: FO	
Mercury	U		0.0000300	0.000200	mg/L	1	03-Jun-2019 14:09
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F				Analyst: RG	
Sulfide	U		1.00	1.00	mg/L	1	04-Jun-2019 10:30
FLASH POINT BY PENSKEY-MARTENS SW1010A		Method:SW1010				Analyst: KAH	
Ignitability	> 212		70.0	70.0	°F	1	06-Jun-2019 15:00
CYANIDE - SW9014		Method:SW9014		Prep:SW9010C / 30-May-2019		Analyst: MZD	
Cyanide	U		0.00500	0.0200	mg/L	1	31-May-2019 10:10
PH BY SW9040C		Method:SW9040C				Analyst: MWG	
pH	7.88	H	0.100	0.100	pH Units	1	03-Jun-2019 11:00
Temp Deg C @pH	22.8	H	0	0	DEG C	1	03-Jun-2019 11:00

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

Revision: 1

WEIGHT LOG

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

Batch ID: 141387 **Method:** LOW-LEVEL TEXAS TPH BY TX1005 **Prep:** TX 1005_W PR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19051772-01	1	30.72	3 (mL)	0.09766

Batch ID: 141401 **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D **Prep:** 3510_B_LOW

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19051772-01	1	1000	1 (mL)	0.001

Batch ID: 141461 **Method:** CYANIDE - SW9014 **Prep:** CN_TW_PR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19051772-01	1	50	50 (mL)	1

Batch ID: 141478 **Method:** ICP-MS METALS BY SW6020A **Prep:** 3010A

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19051772-01	1	10	10 (mL)	1

Batch ID: 141540 **Method:** MERCURY BY SW7470A **Prep:** HG_WPR

SampleID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS19051772-01	1	10 (mL)	10 (mL)	1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

DATES REPORT

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
Batch ID 141387	Test Name : LOW-LEVEL TEXAS TPH BY TX1005				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35		29 May 2019 15:00	31 May 2019 04:34	1
Batch ID 141401	Test Name : LOW-LEVEL SEMIVOLATILES BY 8270D				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35		30 May 2019 10:22	01 Jun 2019 19:32	1
Batch ID 141461	Test Name : CYANIDE - SW9014				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35		30 May 2019 12:00	31 May 2019 10:10	1
Batch ID 141478	Test Name : ICP-MS METALS BY SW6020A				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35		31 May 2019 11:00	01 Jun 2019 00:11	1
Batch ID 141540	Test Name : MERCURY BY SW7470A				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35		03 Jun 2019 10:00	03 Jun 2019 14:09	1
Batch ID R339533	Test Name : LOW LEVEL VOLATILES BY SW8260C				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35			30 May 2019 17:05	1
Batch ID R339672	Test Name : PH BY SW9040C				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35			03 Jun 2019 11:00	1
Batch ID R339744	Test Name : SULFIDE BY SM4500 S2-F				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35			04 Jun 2019 10:30	1
Batch ID R339969	Test Name : FLASH POINT BY PENSKY-MARTENS SW1010A				Matrix: Water	
HS19051772-01	WG-1620-IDW-W-20190529	29 May 2019 11:35			06 Jun 2019 15:00	1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141387 (0)		Instrument: FID-12		Method: LOW-LEVEL TEXAS TPH BY TX1005					
MBLK	Sample ID: MBLK-141387	Units: mg/L			Analysis Date: 30-May-2019 21:22				
Client ID:	Run ID: FID-12_339565	SeqNo: 5100893		PrepDate: 29-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

nC6 to nC12	U	0.50							
>nC12 to nC28	U	0.50							
>nC28 to nC35	U	0.50							
Total Petroleum Hydrocarbon	U	0.50							
Surr: 2-Fluorobiphenyl	2.317	0	2.5	0	92.7	70 - 130			
Surr: Trifluoromethyl benzene	2.293	0	2.5	0	91.7	70 - 130			

LCS	Sample ID: LCS-141387	Units: mg/L			Analysis Date: 30-May-2019 21:51				
Client ID:	Run ID: FID-12_339565	SeqNo: 5100894		PrepDate: 29-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
nC6 to nC12	27.47	0.50	25	0	110	75 - 125			
>nC12 to nC28	27.5	0.50	25	0	110	75 - 125			
Surr: 2-Fluorobiphenyl	2.705	0	2.5	0	108	70 - 130			
Surr: Trifluoromethyl benzene	2.739	0	2.5	0	110	70 - 130			

LCSD	Sample ID: LCSD-141387	Units: mg/L			Analysis Date: 30-May-2019 22:20				
Client ID:	Run ID: FID-12_339565	SeqNo: 5100895		PrepDate: 29-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
nC6 to nC12	22	0.50	25	0	88.0	75 - 125	27.47	22.1	20 R
>nC12 to nC28	22.28	0.50	25	0	89.1	75 - 125	27.5	21	20 R
Surr: 2-Fluorobiphenyl	2.309	0	2.5	0	92.4	70 - 130	2.705	15.8	20
Surr: Trifluoromethyl benzene	2.268	0	2.5	0	90.7	70 - 130	2.739	18.8	20

MS	Sample ID: HS19051607-04MS	Units: mg/L			Analysis Date: 31-May-2019 00:43				
Client ID:	Run ID: FID-12_339565	SeqNo: 5100897		PrepDate: 29-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
nC6 to nC12	25.28	0.50	25.06	0	101	75 - 125			
>nC12 to nC28	27.57	0.50	25.06	0	110	75 - 125			
Surr: 2-Fluorobiphenyl	2.61	0	2.506	0	104	70 - 130			
Surr: Trifluoromethyl benzene	2.43	0	2.506	0	97.0	70 - 130			

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141387 (0) **Instrument:** FID-12 **Method:** LOW-LEVEL TEXAS TPH BY TX1005

MSD		Sample ID: HS19051607-04MSD			Units: mg/L		Analysis Date: 31-May-2019 01:12			
Client ID:		Run ID: FID-12_339565			SeqNo: 5100898		PrepDate: 29-May-2019		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	27.16	0.50	25.16	0	108	75 - 125	25.28	7.15	20	
>nC12 to nC28	27.47	0.50	25.16	0	109	75 - 125	27.57	0.346	20	
<i>Surr: 2-Fluorobiphenyl</i>	2.938	0	2.516	0	117	70 - 130	2.61	11.8	20	
<i>Surr: Trifluoromethyl benzene</i>	2.752	0	2.516	0	109	70 - 130	2.43	12.4	20	

The following samples were analyzed in this batch: HS19051772-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141478 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A					
MBLK	Sample ID: MBLKF1-141478	Units: mg/L		Analysis Date: 31-May-2019 23:28					
Client ID:	Run ID: ICPMS06_339538	SeqNo: 5102626		PrepDate: 31-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Antimony	U	0.00200							
Arsenic	U	0.00200							
Barium	0.00315	0.00400							J
Beryllium	U	0.00200							
Cadmium	U	0.00200							
Chromium	U	0.00400							
Lead	U	0.00200							
Nickel	U	0.00200							
Selenium	U	0.00200							
Silver	U	0.00200							

MBLK	Sample ID: MBLK-141478	Units: mg/L		Analysis Date: 31-May-2019 23:26					
Client ID:	Run ID: ICPMS06_339538	SeqNo: 5102625		PrepDate: 31-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Antimony	U	0.00200							
Arsenic	U	0.00200							
Barium	U	0.00400							
Beryllium	U	0.00200							
Cadmium	U	0.00200							
Chromium	U	0.00400							
Lead	U	0.00200							
Nickel	U	0.00200							
Selenium	U	0.00200							
Silver	U	0.00200							

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141478 (0) **Instrument:** ICPMS06 **Method:** ICP-MS METALS BY SW6020A

LCS		Sample ID: LCS-141478			Units: mg/L		Analysis Date: 31-May-2019 23:30			
Client ID:		Run ID: ICPMS06_339538			SeqNo: 5102627		PrepDate: 31-May-2019		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04956	0.00200	0.05	0	99.1	80 - 120				
Arsenic	0.04876	0.00200	0.05	0	97.5	80 - 120				
Barium	0.04854	0.00400	0.05	0	97.1	80 - 120				
Beryllium	0.04803	0.00200	0.05	0	96.1	80 - 120				
Cadmium	0.04938	0.00200	0.05	0	98.8	80 - 120				
Chromium	0.04808	0.00400	0.05	0	96.2	80 - 120				
Lead	0.0475	0.00200	0.05	0	95.0	80 - 120				
Nickel	0.04942	0.00200	0.05	0	98.8	80 - 120				
Selenium	0.0515	0.00200	0.05	0	103	80 - 120				
Silver	0.0546	0.00200	0.05	0	109	80 - 120				

MS		Sample ID: HS19051850-03MS			Units: mg/L		Analysis Date: 31-May-2019 23:39			
Client ID:		Run ID: ICPMS06_339538			SeqNo: 5102632		PrepDate: 31-May-2019		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04944	0.00200	0.05	-0.000554	100.0	80 - 120				
Arsenic	0.05055	0.00200	0.05	0.000794	99.5	80 - 120				
Barium	0.44	0.00400	0.05	0.3664	147	80 - 120				SO
Beryllium	0.04816	0.00200	0.05	0.000011	96.3	80 - 120				
Cadmium	0.05034	0.00200	0.05	0.000018	101	80 - 120				
Chromium	0.1352	0.00400	0.05	0.0279	215	80 - 120				S
Lead	0.05114	0.00200	0.05	0.000147	102	80 - 120				
Nickel	0.2741	0.00200	0.05	0.206	136	80 - 120				SO
Selenium	0.05099	0.00200	0.05	0.000467	101	80 - 120				
Silver	0.05342	0.00200	0.05	-0.000008	107	80 - 120				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141478 (0)		Instrument: ICPMS06			Method: ICP-MS METALS BY SW6020A					
MSD		Sample ID: HS19051850-03MSD			Units: mg/L		Analysis Date: 31-May-2019 23:41			
Client ID:		Run ID: ICPMS06_339538			SeqNo: 5102633		PrepDate: 31-May-2019		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05253	0.00200	0.05	-0.000554	106	80 - 120	0.04944	6.06	20	
Arsenic	0.05277	0.00200	0.05	0.000794	104	80 - 120	0.05055	4.3	20	
Barium	0.4384	0.00400	0.05	0.3664	144	80 - 120	0.44	0.368	20	SO
Beryllium	0.04972	0.00200	0.05	0.000011	99.4	80 - 120	0.04816	3.2	20	
Cadmium	0.0514	0.00200	0.05	0.000018	103	80 - 120	0.05034	2.08	20	
Chromium	0.1197	0.00400	0.05	0.0279	184	80 - 120	0.1352	12.2	20	S
Lead	0.05042	0.00200	0.05	0.000147	101	80 - 120	0.05114	1.41	20	
Nickel	0.2818	0.00200	0.05	0.206	152	80 - 120	0.2741	2.77	20	SO
Selenium	0.05276	0.00200	0.05	0.000467	105	80 - 120	0.05099	3.42	20	
Silver	0.05362	0.00200	0.05	-0.000008	107	80 - 120	0.05342	0.362	20	
PDS		Sample ID: HS19051850-03PDS			Units: mg/L		Analysis Date: 03-Jun-2019 12:04			
Client ID:		Run ID: ICPMS04_339653			SeqNo: 5103542		PrepDate: 31-May-2019		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09062	0.00200	0.1	0	90.6	75 - 125				
Barium	0.4529	0.00400	0.1	0.3664	86.4	75 - 125				
Beryllium	0.09399	0.00200	0.1	0	94.0	75 - 125				
Chromium	0.1265	0.00400	0.1	0.0279	98.6	75 - 125				
Selenium	0.094	0.00200	0.1	0	94.0	75 - 125				
PDS		Sample ID: HS19051850-03PDS			Units: mg/L		Analysis Date: 31-May-2019 23:43			
Client ID:		Run ID: ICPMS06_339538			SeqNo: 5102634		PrepDate: 31-May-2019		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.1244	0.00200	0.1	0.000794	124	75 - 125				
Cadmium	0.1243	0.00200	0.1	0.000018	124	75 - 125				
Lead	0.1242	0.00200	0.1	0.000147	124	75 - 125				
Nickel	0.3242	0.00200	0.1	0.206	118	75 - 125				
Silver	0.1237	0.00200	0.1	-0.000008	124	75 - 125				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141478 (0) **Instrument:** ICPMS06 **Method:** ICP-MS METALS BY SW6020A

SD Sample ID: **HS19051850-03SD** Units: **mg/L** Analysis Date: **31-May-2019 23:38**
 Client ID: Run ID: **ICPMS06_339538** SeqNo: **5102631** PrepDate: **31-May-2019** DF: **5**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %D Limit Qual

Antimony	U	0.0100					-0.000554	0	10
Arsenic	U	0.0100					0.000794	0	10
Barium	0.3548	0.0200					0.3664	3.18	10
Beryllium	U	0.0100					0.000011	0	10
Cadmium	U	0.0100					0.000018	0	10
Chromium	0.02755	0.0200					0.0279	1.26	10
Lead	U	0.0100					0.000147	0	10
Nickel	0.2156	0.0100					0.206	4.67	10
Selenium	U	0.0100					0.000467	0	10
Silver	U	0.0100					-0.000008	0	10

The following samples were analyzed in this batch:

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141540 (0)	Instrument: HG03	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-141540	Units: mg/L	Analysis Date: 03-Jun-2019 13:52							
Client ID:	Run ID: HG03_339690	SeqNo: 5104033	PrepDate: 03-Jun-2019 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury U 0.000200

LCS	Sample ID: LCS-141540	Units: mg/L	Analysis Date: 03-Jun-2019 13:53							
Client ID:	Run ID: HG03_339690	SeqNo: 5104034	PrepDate: 03-Jun-2019 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00503 0.000200 0.005 0 101 80 - 120

MS	Sample ID: HS19051859-01MS	Units: mg/L	Analysis Date: 03-Jun-2019 13:57							
Client ID:	Run ID: HG03_339690	SeqNo: 5104036	PrepDate: 03-Jun-2019 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.005 0.000200 0.005 0.00009 98.2 75 - 125

MSD	Sample ID: HS19051859-01MSD	Units: mg/L	Analysis Date: 03-Jun-2019 13:58							
Client ID:	Run ID: HG03_339690	SeqNo: 5104037	PrepDate: 03-Jun-2019 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00502 0.000200 0.005 0.00009 98.6 75 - 125 0.005 0.399 20

The following samples were analyzed in this batch: HS19051772-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D					
MBLK	Sample ID: MBLK-141401	Units: ug/L		Analysis Date: 30-May-2019 15:27					
Client ID:	Run ID: SV-7_339394	SeqNo: 5099150		PrepDate: 30-May-2019		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

1,2,4-Trichlorobenzene	U	0.20							
2,4,5-Trichlorophenol	U	0.20							
2,4,6-Trichlorophenol	U	0.20							
2,4-Dichlorophenol	U	0.20							
2,4-Dimethylphenol	U	0.20							
2,4-Dinitrophenol	U	1.0							
2,4-Dinitrotoluene	U	0.20							
2,6-Dinitrotoluene	U	0.20							
2-Chloronaphthalene	U	0.20							
2-Chlorophenol	U	0.20							
2-Methylnaphthalene	U	0.10							
2-Methylphenol	U	0.20							
2-Nitroaniline	U	0.20							
2-Nitrophenol	U	0.20							
3&4-Methylphenol	U	0.20							
3,3'-Dichlorobenzidine	U	0.20							
3-Nitroaniline	U	0.20							
4,6-Dinitro-2-methylphenol	U	0.20							
4-Bromophenyl phenyl ether	U	0.20							
4-Chloro-3-methylphenol	U	0.20							
4-Chloroaniline	U	0.20							
4-Chlorophenyl phenyl ether	U	0.20							
4-Nitroaniline	U	0.20							
4-Nitrophenol	U	1.0							
Acenaphthene	U	0.10							
Acenaphthylene	U	0.10							
Anthracene	U	0.10							
Benz(a)anthracene	U	0.10							
Benzidine	U	0.20							
Benzo(a)pyrene	U	0.10							
Benzo(b)fluoranthene	U	0.10							
Benzo(g,h,i)perylene	U	0.10							
Benzo(k)fluoranthene	U	0.10							
Benzyl alcohol	U	0.20							

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-141401	Units: ug/L			Analysis Date: 30-May-2019 15:27					
Client ID:	Run ID: SV-7_339394	SeqNo: 5099150	PrepDate: 30-May-2019	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	U	0.20								
Bis(2-chloroethyl)ether	U	0.20								
Bis(2-chloroisopropyl)ether	U	0.20								
Bis(2-ethylhexyl)phthalate	U	0.20								
Butyl benzyl phthalate	U	0.20								
Carbazole	U	0.20								
Chrysene	U	0.10								
Dibenz(a,h)anthracene	U	0.10								
Dibenzofuran	U	0.10								
Diethyl phthalate	U	0.20								
Dimethyl phthalate	U	0.20								
Di-n-butyl phthalate	U	0.20								
Di-n-octyl phthalate	U	0.20								
Fluoranthene	U	0.10								
Fluorene	U	0.10								
Hexachlorobenzene	U	0.20								
Hexachlorobutadiene	U	0.20								
Hexachlorocyclopentadiene	U	0.20								
Hexachloroethane	U	0.20								
Indeno(1,2,3-cd)pyrene	U	0.10								
Isophorone	U	0.20								
Naphthalene	U	0.10								
Nitrobenzene	U	0.20								
N-Nitrosodimethylamine	U	0.20								
N-Nitrosodi-n-propylamine	U	0.20								
N-Nitrosodiphenylamine	U	0.20								
Pentachlorophenol	U	0.20								
Phenanthrene	U	0.10								
Phenol	U	0.20								
Pyrene	U	0.10								
Pyridine	U	1.0								
Surr: 2,4,6-Tribromophenol	3.553	0.20	5	0	71.1	34 - 129				
Surr: 2-Fluorobiphenyl	4.08	0.20	5	0	81.6	40 - 125				
Surr: 2-Fluorophenol	3.361	0.20	5	0	67.2	20 - 120				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-141401	Units: ug/L			Analysis Date: 30-May-2019 15:27					
Client ID:	Run ID: SV-7_339394	SeqNo: 5099150		PrepDate: 30-May-2019		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
<i>Surr: 4-Terphenyl-d14</i>	4.517	0.20	5	0	90.3	40 - 135				
<i>Surr: Nitrobenzene-d5</i>	3.733	0.20	5	0	74.7	41 - 120				
<i>Surr: Phenol-d6</i>	3.819	0.20	5	0	76.4	20 - 120				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-141401	Units: ug/L			Analysis Date: 30-May-2019 13:30					
Client ID:	Run ID: SV-7_339394	SeqNo: 5098683	PrepDate: 30-May-2019	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	5.202	0.20	5	0	104	45 - 120				
2,4,5-Trichlorophenol	5.57	0.20	5	0	111	46 - 120				
2,4,6-Trichlorophenol	5.363	0.20	5	0	107	42 - 120				
2,4-Dichlorophenol	5.341	0.20	5	0	107	49 - 120				
2,4-Dimethylphenol	4.835	0.20	5	0	96.7	35 - 120				
2,4-Dinitrophenol	3.477	1.0	5	0	69.5	15 - 120				
2,4-Dinitrotoluene	5.449	0.20	5	0	109	50 - 122				
2,6-Dinitrotoluene	5.582	0.20	5	0	112	50 - 120				
2-Chloronaphthalene	5.501	0.20	5	0	110	50 - 120				
2-Chlorophenol	4.86	0.20	5	0	97.2	40 - 120				
2-Methylnaphthalene	5.078	0.10	5	0	102	50 - 120				
2-Methylphenol	5.074	0.20	5	0	101	45 - 120				
2-Nitroaniline	5.113	0.20	5	0	102	28 - 139				
2-Nitrophenol	4.871	0.20	5	0	97.4	40 - 120				
3&4-Methylphenol	4.759	0.20	5	0	95.2	35 - 120				
3,3'-Dichlorobenzidine	4.713	0.20	5	0	94.3	15 - 120				
3-Nitroaniline	5.905	0.20	5	0	118	30 - 120				
4,6-Dinitro-2-methylphenol	3.974	0.20	5	0	79.5	25 - 121				
4-Bromophenyl phenyl ether	5.174	0.20	5	0	103	45 - 120				
4-Chloro-3-methylphenol	5.5	0.20	5	0	110	47 - 120				
4-Chloroaniline	5.338	0.20	5	0	107	20 - 120				
4-Chlorophenyl phenyl ether	5.324	0.20	5	0	106	50 - 120				
4-Nitroaniline	5.754	0.20	5	0	115	30 - 133				
4-Nitrophenol	5.316	1.0	5	0	106	30 - 130				
Acenaphthene	4.926	0.10	5	0	98.5	45 - 120				
Acenaphthylene	5.12	0.10	5	0	102	47 - 120				
Anthracene	5.16	0.10	5	0	103	45 - 120				
Benz(a)anthracene	5.056	0.10	5	0	101	40 - 120				
Benzidine	1.544	0.20	5	0	30.9	10 - 120				
Benzo(a)pyrene	5.469	0.10	5	0	109	45 - 120				
Benzo(b)fluoranthene	5.507	0.10	5	0	110	50 - 120				
Benzo(g,h,i)perylene	4.976	0.10	5	0	99.5	42 - 127				
Benzo(k)fluoranthene	5.331	0.10	5	0	107	45 - 127				
Benzyl alcohol	4.778	0.20	5	0	95.6	35 - 122				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-141401	Units: ug/L			Analysis Date: 30-May-2019 13:30					
Client ID:	Run ID: SV-7_339394	SeqNo: 5098683		PrepDate: 30-May-2019		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	5.07	0.20	5	0	101	45 - 120				
Bis(2-chloroethyl)ether	5.42	0.20	5	0	108	37 - 121				
Bis(2-chloroisopropyl)ether	5.102	0.20	5	0	102	40 - 120				
Bis(2-ethylhexyl)phthalate	5.83	0.20	5	0	117	40 - 139				
Butyl benzyl phthalate	5.814	0.20	5	0	116	47 - 123				
Carbazole	5.779	0.20	5	0	116	42 - 128				
Chrysene	5.629	0.10	5	0	113	43 - 120				
Dibenz(a,h)anthracene	5.269	0.10	5	0	105	45 - 125				
Dibenzofuran	5.42	0.10	5	0	108	50 - 120				
Diethyl phthalate	5.509	0.20	5	0	110	41 - 120				
Dimethyl phthalate	5.419	0.20	5	0	108	40 - 122				
Di-n-butyl phthalate	5.539	0.20	5	0	111	45 - 123				
Di-n-octyl phthalate	5.837	0.20	5	0	117	45 - 129				
Fluoranthene	5.61	0.10	5	0	112	45 - 125				
Fluorene	5.441	0.10	5	0	109	49 - 120				
Hexachlorobenzene	4.863	0.20	5	0	97.3	48 - 120				
Hexachlorobutadiene	4.943	0.20	5	0	98.9	40 - 120				
Hexachlorocyclopentadiene	3.974	0.20	5	0	79.5	34 - 136				
Hexachloroethane	4.814	0.20	5	0	96.3	40 - 120				
Indeno(1,2,3-cd)pyrene	4.547	0.10	5	0	90.9	41 - 128				
Isophorone	5.058	0.20	5	0	101	40 - 121				
Naphthalene	4.947	0.10	5	0	98.9	45 - 120				
Nitrobenzene	4.969	0.20	5	0	99.4	44 - 120				
N-Nitrosodimethylamine	3.796	0.20	5	0	75.9	30 - 121				
N-Nitrosodi-n-propylamine	4.542	0.20	5	0	90.8	40 - 120				
N-Nitrosodiphenylamine	5.296	0.20	5	0	106	40 - 125				
Pentachlorophenol	3.378	0.20	5	0	67.6	19 - 121				
Phenanthrene	5.071	0.10	5	0	101	45 - 121				
Phenol	5.075	0.20	5	0	102	20 - 124				
Pyrene	5.601	0.10	5	0	112	40 - 130				
Pyridine	3.765	1.0	5	0	75.3	15 - 120				
Surr: 2,4,6-Tribromophenol	5.472	0.20	5	0	109	34 - 129				
Surr: 2-Fluorobiphenyl	5.379	0.20	5	0	108	40 - 125				
Surr: 2-Fluorophenol	4.04	0.20	5	0	80.8	20 - 120				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-141401	Units: ug/L			Analysis Date: 30-May-2019 13:30					
Client ID:	Run ID: SV-7_339394	SeqNo: 5098683		PrepDate: 30-May-2019		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
<i>Surr: 4-Terphenyl-d14</i>	5.653	0.20	5	0	113	40 - 135				
<i>Surr: Nitrobenzene-d5</i>	4.905	0.20	5	0	98.1	41 - 120				
<i>Surr: Phenol-d6</i>	4.883	0.20	5	0	97.7	20 - 120				

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCSD		Sample ID: LCSD-141401		Units: ug/L		Analysis Date: 30-May-2019 13:49				
Client ID:		Run ID: SV-7_339394		SeqNo: 5098684		PrepDate: 30-May-2019		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	5.578	0.20	5	0	112	45 - 120	5.202	6.98	20	
2,4,5-Trichlorophenol	5.485	0.20	5	0	110	46 - 120	5.57	1.54	20	
2,4,6-Trichlorophenol	5.278	0.20	5	0	106	42 - 120	5.363	1.6	20	
2,4-Dichlorophenol	5.415	0.20	5	0	108	49 - 120	5.341	1.39	20	
2,4-Dimethylphenol	5.081	0.20	5	0	102	35 - 120	4.835	4.96	20	
2,4-Dinitrophenol	3.152	1.0	5	0	63.0	15 - 120	3.477	9.79	50	
2,4-Dinitrotoluene	5.44	0.20	5	0	109	50 - 122	5.449	0.152	20	
2,6-Dinitrotoluene	5.388	0.20	5	0	108	50 - 120	5.582	3.54	20	
2-Chloronaphthalene	5.372	0.20	5	0	107	50 - 120	5.501	2.36	20	
2-Chlorophenol	4.518	0.20	5	0	90.4	40 - 120	4.86	7.3	20	
2-Methylnaphthalene	5.501	0.10	5	0	110	50 - 120	5.078	8.01	20	
2-Methylphenol	4.849	0.20	5	0	97.0	45 - 120	5.074	4.55	20	
2-Nitroaniline	5.708	0.20	5	0	114	28 - 139	5.113	11	20	
2-Nitrophenol	5.025	0.20	5	0	100	40 - 120	4.871	3.1	20	
3&4-Methylphenol	4.431	0.20	5	0	88.6	35 - 120	4.759	7.14	20	
3,3'-Dichlorobenzidine	5.395	0.20	5	0	108	15 - 120	4.713	13.5	20	
3-Nitroaniline	5.956	0.20	5	0	119	30 - 120	5.905	0.863	20	
4,6-Dinitro-2-methylphenol	3.792	0.20	5	0	75.8	25 - 121	3.974	4.68	30	
4-Bromophenyl phenyl ether	5.588	0.20	5	0	112	45 - 120	5.174	7.69	20	
4-Chloro-3-methylphenol	5.493	0.20	5	0	110	47 - 120	5.5	0.133	20	
4-Chloroaniline	5.462	0.20	5	0	109	20 - 120	5.338	2.28	20	
4-Chlorophenyl phenyl ether	5.367	0.20	5	0	107	50 - 120	5.324	0.794	20	
4-Nitroaniline	5.567	0.20	5	0	111	30 - 133	5.754	3.31	20	
4-Nitrophenol	5.08	1.0	5	0	102	30 - 130	5.316	4.54	20	
Acenaphthene	4.759	0.10	5	0	95.2	45 - 120	4.926	3.46	20	
Acenaphthylene	5.045	0.10	5	0	101	47 - 120	5.12	1.47	20	
Anthracene	5.429	0.10	5	0	109	45 - 120	5.16	5.08	20	
Benz(a)anthracene	5.174	0.10	5	0	103	40 - 120	5.056	2.3	20	
Benzidine	2.054	0.20	5	0	41.1	10 - 120	1.544	28.4	30	
Benzo(a)pyrene	4.775	0.10	5	0	95.5	45 - 120	5.469	13.5	20	
Benzo(b)fluoranthene	5.582	0.10	5	0	112	50 - 120	5.507	1.36	20	
Benzo(g,h,i)perylene	5.205	0.10	5	0	104	42 - 127	4.976	4.49	20	
Benzo(k)fluoranthene	5.017	0.10	5	0	100	45 - 127	5.331	6.07	20	
Benzyl alcohol	4.466	0.20	5	0	89.3	35 - 122	4.778	6.75	20	

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCSD		Sample ID: LCSD-141401		Units: ug/L		Analysis Date: 30-May-2019 13:49				
Client ID:		Run ID: SV-7_339394		SeqNo: 5098684		PrepDate: 30-May-2019		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	5.443	0.20	5	0	109	45 - 120	5.07	7.09	20	
Bis(2-chloroethyl)ether	5.288	0.20	5	0	106	37 - 121	5.42	2.46	20	
Bis(2-chloroisopropyl)ether	4.756	0.20	5	0	95.1	40 - 120	5.102	7.02	20	
Bis(2-ethylhexyl)phthalate	5.895	0.20	5	0	118	40 - 139	5.83	1.1	20	
Butyl benzyl phthalate	6.061	0.20	5	0	121	47 - 123	5.814	4.16	20	
Carbazole	6.041	0.20	5	0	121	42 - 128	5.779	4.43	20	
Chrysene	5.776	0.10	5	0	116	43 - 120	5.629	2.59	20	
Dibenz(a,h)anthracene	5.135	0.10	5	0	103	45 - 125	5.269	2.58	20	
Dibenzofuran	5.305	0.10	5	0	106	50 - 120	5.42	2.14	20	
Diethyl phthalate	5.337	0.20	5	0	107	41 - 120	5.509	3.18	20	
Dimethyl phthalate	5.352	0.20	5	0	107	40 - 122	5.419	1.25	20	
Di-n-butyl phthalate	5.783	0.20	5	0	116	45 - 123	5.539	4.31	20	
Di-n-octyl phthalate	5.451	0.20	5	0	109	45 - 129	5.837	6.84	20	
Fluoranthene	5.515	0.10	5	0	110	45 - 125	5.61	1.71	20	
Fluorene	5.122	0.10	5	0	102	49 - 120	5.441	6.04	20	
Hexachlorobenzene	5.15	0.20	5	0	103	48 - 120	4.863	5.75	20	
Hexachlorobutadiene	5.135	0.20	5	0	103	40 - 120	4.943	3.82	20	
Hexachlorocyclopentadiene	3.744	0.20	5	0	74.9	34 - 136	3.974	5.97	20	
Hexachloroethane	4.569	0.20	5	0	91.4	40 - 120	4.814	5.22	20	
Indeno(1,2,3-cd)pyrene	4.777	0.10	5	0	95.5	41 - 128	4.547	4.94	20	
Isophorone	5.256	0.20	5	0	105	40 - 121	5.058	3.82	20	
Naphthalene	5.255	0.10	5	0	105	45 - 120	4.947	6.03	20	
Nitrobenzene	5.014	0.20	5	0	100	44 - 120	4.969	0.908	20	
N-Nitrosodimethylamine	3.307	0.20	5	0	66.1	30 - 121	3.796	13.8	20	
N-Nitrosodi-n-propylamine	4.376	0.20	5	0	87.5	40 - 120	4.542	3.71	20	
N-Nitrosodiphenylamine	5.548	0.20	5	0	111	40 - 125	5.296	4.65	20	
Pentachlorophenol	3.302	0.20	5	0	66.0	19 - 121	3.378	2.29	20	
Phenanthrene	5.171	0.10	5	0	103	45 - 121	5.071	1.95	20	
Phenol	4.753	0.20	5	0	95.1	20 - 124	5.075	6.56	20	
Pyrene	5.823	0.10	5	0	116	40 - 130	5.601	3.88	20	
Pyridine	4.291	1.0	5	0	85.8	15 - 120	3.765	13	20	
Surr: 2,4,6-Tribromophenol	5.111	0.20	5	0	102	34 - 129	5.472	6.81	20	
Surr: 2-Fluorobiphenyl	5.229	0.20	5	0	105	40 - 125	5.379	2.82	20	
Surr: 2-Fluorophenol	4.486	0.20	5	0	89.7	20 - 120	4.04	10.5	20	

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141401 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCSD	Sample ID: LCSD-141401	Units: ug/L			Analysis Date: 30-May-2019 13:49					
Client ID:	Run ID: SV-7_339394	SeqNo: 5098684		PrepDate: 30-May-2019		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
<i>Surr: 4-Terphenyl-d14</i>	5.825	0.20	5	0	117	40 - 135	5.653	2.99	20	
<i>Surr: Nitrobenzene-d5</i>	5.076	0.20	5	0	102	41 - 120	4.905	3.42	20	
<i>Surr: Phenol-d6</i>	4.579	0.20	5	0	91.6	20 - 120	4.883	6.44	20	

The following samples were analyzed in this batch: HS19051772-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: R339533 (0)		Instrument: VOA6		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-190530	Units: ug/L			Analysis Date: 30-May-2019 13:53				
Client ID:	Run ID: VOA6_339533	SeqNo: 5100302		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	U	1.0							
Ethylbenzene	U	1.0							
Toluene	U	1.0							
Xylenes, Total	U	1.0							
Surr: 1,2-Dichloroethane-d4	43.79	1.0	50	0	87.6	70 - 123			
Surr: 4-Bromofluorobenzene	51.42	1.0	50	0	103	82 - 115			
Surr: Dibromofluoromethane	45.23	1.0	50	0	90.5	73 - 126			
Surr: Toluene-d8	52.3	1.0	50	0	105	81 - 120			

LCS	Sample ID: VLCSW-190530	Units: ug/L			Analysis Date: 30-May-2019 13:05				
Client ID:	Run ID: VOA6_339533	SeqNo: 5100301		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	23.17	1.0	20	0	116	74 - 120			
Ethylbenzene	20.62	1.0	20	0	103	77 - 117			
Toluene	21.12	1.0	20	0	106	77 - 118			
Xylenes, Total	64.07	1.0	60	0	107	75 - 122			
Surr: 1,2-Dichloroethane-d4	48.32	1.0	50	0	96.6	70 - 130			
Surr: 4-Bromofluorobenzene	57.13	1.0	50	0	114	82 - 115			
Surr: Dibromofluoromethane	54.93	1.0	50	0	110	73 - 126			
Surr: Toluene-d8	43.15	1.0	50	0	86.3	81 - 120			

MS	Sample ID: HS19051504-02MS	Units: ug/L			Analysis Date: 30-May-2019 15:53				
Client ID:	Run ID: VOA6_339533	SeqNo: 5100305		PrepDate:		DF: 50			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	1169	50	1000	284.9	88.4	70 - 127			
Ethylbenzene	954.4	50	1000	57.57	89.7	70 - 124			
Toluene	979.6	50	1000	105.7	87.4	70 - 123			
Xylenes, Total	2953	50	3000	159.2	93.1	70 - 130			
Surr: 1,2-Dichloroethane-d4	2136	50	2500	0	85.4	70 - 126			
Surr: 4-Bromofluorobenzene	2586	50	2500	0	103	81 - 113			
Surr: Dibromofluoromethane	2254	50	2500	0	90.2	77 - 123			
Surr: Toluene-d8	2559	50	2500	0	102	82 - 127			

Revision: 1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: R339533 (0)		Instrument: VOA6		Method: LOW LEVEL VOLATILES BY SW8260C					
MSD	Sample ID: HS19051504-02MSD	Units: ug/L		Analysis Date: 30-May-2019 16:17					
Client ID:	Run ID: VOA6_339533	SeqNo: 5100306		PrepDate:		DF: 50			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	1126	50	1000	284.9	84.1	70 - 127	1169	3.8	20
Ethylbenzene	912.8	50	1000	57.57	85.5	70 - 124	954.4	4.46	20
Toluene	958.3	50	1000	105.7	85.3	70 - 123	979.6	2.2	20
Xylenes, Total	2826	50	3000	159.2	88.9	70 - 130	2953	4.4	20
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>2172</i>	<i>50</i>	<i>2500</i>	<i>0</i>	<i>86.9</i>	<i>70 - 126</i>	<i>2136</i>	<i>1.68</i>	<i>20</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>2667</i>	<i>50</i>	<i>2500</i>	<i>0</i>	<i>107</i>	<i>81 - 113</i>	<i>2586</i>	<i>3.1</i>	<i>20</i>
<i>Surr: Dibromofluoromethane</i>	<i>2285</i>	<i>50</i>	<i>2500</i>	<i>0</i>	<i>91.4</i>	<i>77 - 123</i>	<i>2254</i>	<i>1.39</i>	<i>20</i>
<i>Surr: Toluene-d8</i>	<i>2590</i>	<i>50</i>	<i>2500</i>	<i>0</i>	<i>104</i>	<i>82 - 127</i>	<i>2559</i>	<i>1.2</i>	<i>20</i>

The following samples were analyzed in this batch: HS19051772-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: 141461 (0) **Instrument:** UV-2450 **Method:** CYANIDE - SW9014

MBLK Sample ID: **MBLK-141461** Units: **mg/L** Analysis Date: **31-May-2019 10:10**
 Client ID: Run ID: **UV-2450_339532** SeqNo: **5100291** PrepDate: **30-May-2019** DF: **1**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Cyanide U 0.00500

LCS Sample ID: **LCS-141461** Units: **mg/L** Analysis Date: **31-May-2019 10:10**
 Client ID: Run ID: **UV-2450_339532** SeqNo: **5100290** PrepDate: **30-May-2019** DF: **1**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Cyanide 0.21 0.00500 0.2 0 105 80 - 120

MS Sample ID: **HS19051392-01MS** Units: **mg/L** Analysis Date: **31-May-2019 10:10**
 Client ID: Run ID: **UV-2450_339532** SeqNo: **5100288** PrepDate: **30-May-2019** DF: **1**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Cyanide 0.198 0.00500 0.2 0.004 97.0 80 - 120

MSD Sample ID: **HS19051392-01MSD** Units: **mg/L** Analysis Date: **31-May-2019 10:10**
 Client ID: Run ID: **UV-2450_339532** SeqNo: **5100289** PrepDate: **30-May-2019** DF: **1**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Cyanide 0.195 0.00500 0.2 0.004 95.5 80 - 120 0.198 1.53 20

The following samples were analyzed in this batch: HS19051772-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: R339672 (0)		Instrument: WetChem_HS		Method: PH BY SW9040C						
DUP	Sample ID: HS19051742-01DUP	Units: pH Units		Analysis Date: 03-Jun-2019 11:00						
Client ID:	Run ID: WetChem_HS_339672	SeqNo: 5103734		PrepDate:		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.64	0.100					7.61	0.393	10	
Temp Deg C @pH	22.8	0					22.8	0	10	

The following samples were analyzed in this batch:

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: R339744 (0)	Instrument: WetChem_HS	Method: SULFIDE BY SM4500 S2-F
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MBLK	Sample ID: MBLK-R339744	Units: mg/L	Analysis Date: 04-Jun-2019 10:30							
Client ID:	Run ID: WetChem_HS_339744	SeqNo: 5105370	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 1.00

LCS	Sample ID: LCS-R339744	Units: mg/L	Analysis Date: 04-Jun-2019 10:30							
Client ID:	Run ID: WetChem_HS_339744	SeqNo: 5105369	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 21.48 1.00 25 0 85.9 85 - 115

LCSD	Sample ID: LCSD-R339744	Units: mg/L	Analysis Date: 04-Jun-2019 10:30							
Client ID:	Run ID: WetChem_HS_339744	SeqNo: 5105368	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 21.68 1.00 25 0 86.7 85 - 115 21.48 0.927 20

MS	Sample ID: HS19051743-01MS	Units: mg/L	Analysis Date: 04-Jun-2019 10:30							
Client ID:	Run ID: WetChem_HS_339744	SeqNo: 5105371	PrepDate: DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 33.96 1.00 25 13.16 83.2 80 - 120

The following samples were analyzed in this batch: HS19051772-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works
WorkOrder: HS19051772

QC BATCH REPORT

Batch ID: R339969 (0) **Instrument:** WetChem_HS **Method:** FLASH POINT BY PENSKY-MARTENS SW1010A

LCS Sample ID: **LCS-R339969** Units: °F Analysis Date: **06-Jun-2019 15:00**
 Client ID: Run ID: **WetChem_HS_339969** SeqNo: **5110285** PrepDate: DF: **1**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Ignitability 83.65 70.0 84 0 99.6 95 - 105

DUP Sample ID: **HS19051772-01DUP** Units: °F Analysis Date: **06-Jun-2019 15:00**
 Client ID: **WG-1620-IDW-W-20190529** Run ID: **WetChem_HS_339969** SeqNo: **5110286** 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: HS19051772

**QUALIFIERS,
ACRONYMS, UNITS**

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

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

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	19-028-0	27-Mar-2020
Dept of Defense	ANAB L2231	20-Dec-2021
Illinois	004438	29-Jun-2019
Kansas	E-10352 2018-2019	31-Jul-2019
Louisiana	03087	30-Jun-2019
Maryland	343, 2018-2019	30-Jun-2019
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: HS19051772

Date/Time Received: **29-May-2019 14:55**
 Received by: **JRM**

Checklist completed by: Paresh M. Giga 29-May-2019
 eSignature Date

Reviewed by: Dane J. Wacasey 6-Jun-2019
 eSignature Date

Matrices: **Water**

Carrier name: **Client**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- 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:205440
- 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): 1.5c U/c IR25
 Cooler(s)/Kit(s): 43942
 Date/Time sample(s) sent to storage: 5/29/19 16:45

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

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

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COC ID: 205440

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

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				Parameter/Method Request for Analysis													
Purchase Order	UPRR/Kevin Peterburs	Project Name	Houston TX-Wood Preserving Works			A	8260_LL_W (5635947 BTEX (IDWW))												
Work Order		Project Number	1620-07-Rev0 (IDWW)			B	TX1005_W_Low (5643233 TPH TX1005)												
Company Name	Golder Associates Inc.	Bill To Company	Union Pacific Railroad- A/P			C	8270_LOW_W (5632532 SemiVolatiles (w/pyridine))												
Send Report To	Eric Matzner	Invoice Attn	Accounts Payable			D	ICP_TW (5652643 RCRA 8 Metals)												
Address	2201 Double Creek Drive Suite 4004	Address	1400 Douglas Street Stop 0750			E	CN_TW_9014 (5652638 Cyanide - RCI)												
						F	SULFD_4500S F (5652638 Sulfide - RCI)												
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha NE 681790750			G	pH_W_9040C (5632436 pH - RCI)												
Phone	(512) 671-3434	Phone				H	IGN_W (5652637 Ignitability - RCI)												
Fax	(512) 671-3446	Fax				I													
e-Mail Address	Eric_Matzner@golder.com	e-Mail Address				J													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	WG-1620-IDW-W-20190529	5-29-19	1135	W			X	X	X	X	X	X	X	X					
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
Sampler(s) Please Print & Sign John Beardon		Shipment Method HAND DELIVERED		Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				Results Due Date:											
Relinquished by: John Beardon		Date: 5-29-19	Time: 14:55	Received by:				Notes: UPRR Houston HWPW 1620											
Relinquished by:		Date: 5/29/19	Time: 14:55	Received by (Laboratory): J. MUMFORD				Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)									
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):				43942	1.5	<input checked="" type="checkbox"/>	Level II Std QC		<input type="checkbox"/>		TRRP Checklist				
									1025	<input type="checkbox"/>	Level III Std QC/Raw Data		<input type="checkbox"/>		TRRP Level IV				
									CF00	<input type="checkbox"/>	Level IV SW846/CLP		<input type="checkbox"/>						
										<input type="checkbox"/>	Other								
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035																			

HS19051772

Golder Associates Inc.
Houston TX-Wood Preserving Works - IDWW



- 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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