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June 17, 2020

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

Work Order: **HS20060314**

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

Dear Eric,

ALS Environmental received 2 sample(s) on Jun 05, 2020 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
Dane J. Wacasey

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
Work Order: HS20060314

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20060314-01	SO-1620-DRUM01-20200605	Solid		05-Jun-2020 11:30	05-Jun-2020 13:20	<input type="checkbox"/>
HS20060314-02	WW-1620-DRUM02-20200605	Water		05-Jun-2020 11:40	05-Jun-2020 13:20	<input type="checkbox"/>

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
Work Order: HS20060314

CASE NARRATIVE**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: 154268**

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

Batch ID: 154295

Sample ID: HS20060316-01MS

- MS and MSD are for an unrelated sample

GCMS Semivolatiles by Method SW8270**Batch ID: 154287**

Sample ID: HS20060313-35MS

- MS and MSD are for an unrelated sample

Sample ID: LCS-154287

- LCS recovery was above the control limits for 3,3'-Dichlorobenzidine. The analyte was not detected in the samples.

Batch ID: 154335

Sample ID: LCSD-154335

- The RPD between the LCS and LCSD was outside of the control limit for Benzidine. Individual %R were within criteria.

Sample ID: MBLK-154335

- MBLK was spiked at 2X the normal concentration, however calculations were adjusted accordingly and the recoveries were within control limits.

Sample ID: WW-1620-DRUM02-20200605 (HS20060314-02)

- Sample was spiked at 2X the normal concentration, however calculations were adjusted accordingly and the recoveries were within control limits.

GCMS Volatiles by Method SW8260**Batch ID: R362887**

Sample ID: HS20060283-01MS

- MS and MSD are for an unrelated sample

Batch ID: R363212

Sample ID: HS20060287-01MS

- MS and MSD are for an unrelated sample

Sample ID: VLCSW-200613

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
Work Order: HS20060314

CASE NARRATIVE

GCMS Volatiles by Method SW8260

Batch ID: R363212

- Bromomethane is exceeded %recovery limits on LCS. The analyte was not detected in the samples.
-

Metals by Method SW7470

Batch ID: 154415

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

Metals by Method SW6020

Batch ID: 154341

Sample ID: HS20060410-02MS

- MS and MSD are for an unrelated sample

Batch ID: 154388

Sample ID: HS20060422-01MS

- MS and MSD are for an unrelated sample
-

Metals by Method SW7471A

Batch ID: 154215

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

WetChemistry by Method SW9040C

Batch ID: R363048

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

WetChemistry by Method SW1010

Batch ID: R363027

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

WetChemistry by Method SW9045D

Batch ID: R362991

- 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 IDW
 Sample ID: SO-1620-DRUM01-20200605
 Collection Date: 05-Jun-2020 11:30

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-01
 Matrix:Solid

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR			
1,1,1-Trichloroethane	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,1,2,2-Tetrachloroethane	U		0.00078	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,1,2-Trichloroethane	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,1-Dichloroethane	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,1-Dichloroethene	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,2-Dichlorobenzene	U		0.00098	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,2-Dichloroethane	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,2-Dichloropropane	U		0.00078	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,3-Dichlorobenzene	U		0.00098	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,4-Dichlorobenzene	U		0.00098	0.0049	mg/Kg	1	09-Jun-2020 13:54
2-Butanone	U		0.0013	0.0098	mg/Kg	1	09-Jun-2020 13:54
2-Hexanone	U		0.0014	0.0098	mg/Kg	1	09-Jun-2020 13:54
4-Methyl-2-pentanone	U		0.0020	0.0098	mg/Kg	1	09-Jun-2020 13:54
Acetone	U		0.0020	0.020	mg/Kg	1	09-Jun-2020 13:54
Benzene	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
Bromochloromethane	U		0.00088	0.0049	mg/Kg	1	09-Jun-2020 13:54
Bromodichloromethane	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
Bromoform	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
Bromomethane	U		0.00098	0.0098	mg/Kg	1	09-Jun-2020 13:54
Carbon disulfide	U		0.00059	0.0098	mg/Kg	1	09-Jun-2020 13:54
Carbon tetrachloride	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
Chlorobenzene	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
Chloroethane	U		0.00078	0.0098	mg/Kg	1	09-Jun-2020 13:54
Chloroform	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
Chloromethane	U		0.00049	0.0098	mg/Kg	1	09-Jun-2020 13:54
cis-1,2-Dichloroethene	U		0.00078	0.0049	mg/Kg	1	09-Jun-2020 13:54
cis-1,3-Dichloropropene	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
Dibromochloromethane	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
Ethylbenzene	U		0.00069	0.0049	mg/Kg	1	09-Jun-2020 13:54
m,p-Xylene	U		0.0016	0.0098	mg/Kg	1	09-Jun-2020 13:54
Methylene chloride	U		0.00098	0.0098	mg/Kg	1	09-Jun-2020 13:54
o-Xylene	U		0.00098	0.0049	mg/Kg	1	09-Jun-2020 13:54
Styrene	U		0.00069	0.0049	mg/Kg	1	09-Jun-2020 13:54
Tetrachloroethene	U		0.00069	0.0049	mg/Kg	1	09-Jun-2020 13:54
Toluene	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
trans-1,2-Dichloroethene	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
trans-1,3-Dichloropropene	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
Trichloroethene	U		0.00059	0.0049	mg/Kg	1	09-Jun-2020 13:54
Vinyl acetate	U		0.00098	0.0098	mg/Kg	1	09-Jun-2020 13:54

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: SO-1620-DRUM01-20200605
 Collection Date: 05-Jun-2020 11:30

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-01
 Matrix:Solid

ANALYSES	RESULT	QUAL	SDL	ML	UNITS	DILUTION FACTOR	DATE ANALYZED
VOLATILES BY SW8260C		Method:SW8260		Analyst: WLR			
Vinyl chloride	U		0.00078	0.0020	mg/Kg	1	09-Jun-2020 13:54
Xylenes, Total	U		0.00098	0.0049	mg/Kg	1	09-Jun-2020 13:54
1,2-Dichloroethene, Total	U		0.00049	0.0049	mg/Kg	1	09-Jun-2020 13:54
Surr: 1,2-Dichloroethane-d4	96.6			70-126	%REC	1	09-Jun-2020 13:54
Surr: 4-Bromofluorobenzene	98.9			70-130	%REC	1	09-Jun-2020 13:54
Surr: Dibromofluoromethane	98.8			70-130	%REC	1	09-Jun-2020 13:54
Surr: Toluene-d8	96.3			70-130	%REC	1	09-Jun-2020 13:54

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: SO-1620-DRUM01-20200605
 Collection Date: 05-Jun-2020 11:30

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-01
 Matrix:Solid

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		Method:SW8270		Prep:SW3541 / 09-Jun-2020		Analyst: GEY	
1,2,4-Trichlorobenzene	U		0.0012	0.0066	mg/Kg	1	15-Jun-2020 20:04
2,4,5-Trichlorophenol	U		0.0025	0.0066	mg/Kg	1	15-Jun-2020 20:04
2,4,6-Trichlorophenol	U		0.0017	0.0066	mg/Kg	1	15-Jun-2020 20:04
2,4-Dichlorophenol	U		0.0013	0.0066	mg/Kg	1	15-Jun-2020 20:04
2,4-Dimethylphenol	U		0.0033	0.0066	mg/Kg	1	15-Jun-2020 20:04
2,4-Dinitrophenol	U		0.0045	0.013	mg/Kg	1	15-Jun-2020 20:04
2,4-Dinitrotoluene	U		0.00089	0.0066	mg/Kg	1	15-Jun-2020 20:04
2,6-Dinitrotoluene	U		0.0033	0.0066	mg/Kg	1	15-Jun-2020 20:04
2-Chloronaphthalene	U		0.0013	0.0066	mg/Kg	1	15-Jun-2020 20:04
2-Chlorophenol	U		0.0013	0.0066	mg/Kg	1	15-Jun-2020 20:04
2-Methylnaphthalene	0.0011	J	0.00050	0.0033	mg/Kg	1	15-Jun-2020 20:04
2-Methylphenol	U		0.0011	0.0066	mg/Kg	1	15-Jun-2020 20:04
2-Nitroaniline	U		0.0019	0.0066	mg/Kg	1	15-Jun-2020 20:04
2-Nitrophenol	U		0.0025	0.0066	mg/Kg	1	15-Jun-2020 20:04
3&4-Methylphenol	U		0.00099	0.0066	mg/Kg	1	15-Jun-2020 20:04
3,3'-Dichlorobenzidine	U		0.0025	0.0066	mg/Kg	1	15-Jun-2020 20:04
3-Nitroaniline	U		0.0019	0.0066	mg/Kg	1	15-Jun-2020 20:04
4,6-Dinitro-2-methylphenol	U		0.0021	0.0066	mg/Kg	1	15-Jun-2020 20:04
4-Bromophenyl phenyl ether	U		0.0016	0.0066	mg/Kg	1	15-Jun-2020 20:04
4-Chloro-3-methylphenol	U		0.00070	0.0066	mg/Kg	1	15-Jun-2020 20:04
4-Chloroaniline	U		0.0011	0.0066	mg/Kg	1	15-Jun-2020 20:04
4-Chlorophenyl phenyl ether	U		0.0015	0.0066	mg/Kg	1	15-Jun-2020 20:04
4-Nitroaniline	U		0.0022	0.0066	mg/Kg	1	15-Jun-2020 20:04
4-Nitrophenol	U		0.0019	0.013	mg/Kg	1	15-Jun-2020 20:04
Acenaphthene	0.0044		0.00050	0.0033	mg/Kg	1	15-Jun-2020 20:04
Acenaphthylene	0.034		0.00099	0.0033	mg/Kg	1	15-Jun-2020 20:04
Anthracene	0.057		0.00050	0.0033	mg/Kg	1	15-Jun-2020 20:04
Benz(a)anthracene	0.073		0.0016	0.0033	mg/Kg	1	15-Jun-2020 20:04
Benzidine	U		0.0014	0.0066	mg/Kg	1	15-Jun-2020 20:04
Benzo(a)pyrene	0.076		0.00099	0.0033	mg/Kg	1	15-Jun-2020 20:04
Benzo(b)fluoranthene	0.15		0.0012	0.0033	mg/Kg	1	15-Jun-2020 20:04
Benzo(g,h,i)perylene	0.11		0.00070	0.0033	mg/Kg	1	15-Jun-2020 20:04
Benzo(k)fluoranthene	0.076		0.00089	0.0033	mg/Kg	1	15-Jun-2020 20:04
Benzyl alcohol	U		0.00070	0.0066	mg/Kg	1	15-Jun-2020 20:04
Bis(2-chloroethoxy)methane	U		0.00089	0.0066	mg/Kg	1	15-Jun-2020 20:04
Bis(2-chloroethyl)ether	U		0.0011	0.0066	mg/Kg	1	15-Jun-2020 20:04
Bis(2-chloroisopropyl)ether	U		0.0014	0.0066	mg/Kg	1	15-Jun-2020 20:04
Bis(2-ethylhexyl)phthalate	0.046		0.0017	0.0066	mg/Kg	1	15-Jun-2020 20:04
Butyl benzyl phthalate	U		0.0013	0.0066	mg/Kg	1	15-Jun-2020 20:04

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: SO-1620-DRUM01-20200605
 Collection Date: 05-Jun-2020 11:30

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-01
 Matrix:Solid

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		Method:SW8270		Prep:SW3541 / 09-Jun-2020		Analyst: GEY	
Carbazole	0.036		0.0012	0.0066	mg/Kg	1	15-Jun-2020 20:04
Chrysene	0.088		0.00080	0.0033	mg/Kg	1	15-Jun-2020 20:04
Di-n-butyl phthalate	0.0053	J	0.0012	0.0066	mg/Kg	1	15-Jun-2020 20:04
Di-n-octyl phthalate		U	0.00089	0.0066	mg/Kg	1	15-Jun-2020 20:04
Dibenz(a,h)anthracene	0.035		0.0016	0.0033	mg/Kg	1	15-Jun-2020 20:04
Dibenzofuran	0.0017	J	0.00070	0.0033	mg/Kg	1	15-Jun-2020 20:04
Diethyl phthalate		U	0.00099	0.0066	mg/Kg	1	15-Jun-2020 20:04
Dimethyl phthalate		U	0.00080	0.0066	mg/Kg	1	15-Jun-2020 20:04
Fluoranthene	0.16		0.0011	0.0033	mg/Kg	1	15-Jun-2020 20:04
Fluorene	0.0050		0.0011	0.0033	mg/Kg	1	15-Jun-2020 20:04
Hexachlorobenzene		U	0.00089	0.0066	mg/Kg	1	15-Jun-2020 20:04
Hexachlorobutadiene		U	0.0012	0.0066	mg/Kg	1	15-Jun-2020 20:04
Hexachlorocyclopentadiene		U	0.00080	0.0066	mg/Kg	1	15-Jun-2020 20:04
Hexachloroethane		U	0.0015	0.0066	mg/Kg	1	15-Jun-2020 20:04
Indeno(1,2,3-cd)pyrene	0.080		0.00080	0.0033	mg/Kg	1	15-Jun-2020 20:04
Isophorone		U	0.00080	0.0066	mg/Kg	1	15-Jun-2020 20:04
N-Nitrosodi-n-propylamine		U	0.0011	0.0066	mg/Kg	1	15-Jun-2020 20:04
N-Nitrosodimethylamine		U	0.0012	0.0066	mg/Kg	1	15-Jun-2020 20:04
N-Nitrosodiphenylamine		U	0.00070	0.0066	mg/Kg	1	15-Jun-2020 20:04
Naphthalene	0.0021	J	0.00060	0.0033	mg/Kg	1	15-Jun-2020 20:04
Nitrobenzene		U	0.00089	0.0066	mg/Kg	1	15-Jun-2020 20:04
Pentachlorophenol	0.49		0.033	0.066	mg/Kg	10	16-Jun-2020 15:57
Phenanthrene	0.043		0.0015	0.0033	mg/Kg	1	15-Jun-2020 20:04
Phenol	0.0077		0.0011	0.0066	mg/Kg	1	15-Jun-2020 20:04
Pyrene	0.15		0.00060	0.0033	mg/Kg	1	15-Jun-2020 20:04
Pyridine		U	0.00089	0.0066	mg/Kg	1	15-Jun-2020 20:04
Surr: 2,4,6-Tribromophenol	46.1			36-126	%REC	10	16-Jun-2020 15:57
Surr: 2,4,6-Tribromophenol	66.5			36-126	%REC	1	15-Jun-2020 20:04
Surr: 2-Fluorobiphenyl	55.4			43-125	%REC	1	15-Jun-2020 20:04
Surr: 2-Fluorobiphenyl	73.7			43-125	%REC	10	16-Jun-2020 15:57
Surr: 2-Fluorophenol	93.6			37-125	%REC	10	16-Jun-2020 15:57
Surr: 2-Fluorophenol	54.1			37-125	%REC	1	15-Jun-2020 20:04
Surr: 4-Terphenyl-d14	79.0			32-125	%REC	10	16-Jun-2020 15:57
Surr: 4-Terphenyl-d14	51.7			32-125	%REC	1	15-Jun-2020 20:04
Surr: Nitrobenzene-d5	48.2			37-125	%REC	10	16-Jun-2020 15:57
Surr: Nitrobenzene-d5	50.6			37-125	%REC	1	15-Jun-2020 20:04
Surr: Phenol-d6	65.4			40-125	%REC	1	15-Jun-2020 20:04
Surr: Phenol-d6	87.8			40-125	%REC	10	16-Jun-2020 15:57

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: SO-1620-DRUM01-20200605
 Collection Date: 05-Jun-2020 11:30

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-01
 Matrix:Solid

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
TEXAS TPH BY TX1005		Method:TX1005		Prep:TX1005PR / 09-Jun-2020		Analyst: MBG	
nC6 to nC12		U	6.2	42	mg/Kg	1	09-Jun-2020 22:21
>nC12 to nC28		U	8.2	42	mg/Kg	1	09-Jun-2020 22:21
>nC28 to nC35	8.5	J	8.2	42	mg/Kg	1	09-Jun-2020 22:21
Total Petroleum Hydrocarbon	8.50	J	6.2	42	mg/Kg	1	09-Jun-2020 22:21
Surr: 2-Fluorobiphenyl	97.9			70-130	%REC	1	09-Jun-2020 22:21
Surr: Trifluoromethyl benzene	105			70-130	%REC	1	09-Jun-2020 22:21
METALS BY SW6020A		Method:SW6020		Prep:SW3050A / 11-Jun-2020		Analyst: JC	
Antimony	0.0770	J	0.0630	0.485	mg/Kg	1	11-Jun-2020 17:52
Arsenic	1.30		0.0679	0.485	mg/Kg	1	11-Jun-2020 17:52
Barium	98.9		0.0291	0.485	mg/Kg	1	11-Jun-2020 17:52
Beryllium	0.459	J	0.0204	0.485	mg/Kg	1	11-Jun-2020 17:52
Cadmium	0.0860	J	0.0262	0.485	mg/Kg	1	11-Jun-2020 17:52
Chromium	7.88		0.0223	0.485	mg/Kg	1	11-Jun-2020 17:52
Lead	52.0		0.0126	0.485	mg/Kg	1	11-Jun-2020 17:52
Nickel	3.45		0.0465	0.485	mg/Kg	1	11-Jun-2020 17:52
Selenium	0.279	J	0.0882	0.485	mg/Kg	1	11-Jun-2020 17:52
Silver	0.0327	J	0.0145	0.485	mg/Kg	1	11-Jun-2020 17:52
MERCURY BY SW7471B		Method:SW7471A		Prep:SW7471A / 08-Jun-2020		Analyst: FO	
Mercury	0.0116		0.000480	0.00339	mg/Kg	1	08-Jun-2020 19:09
PH SOIL BY SW9045D		Method:SW9045D				Analyst: JAC	
pH	7.39	H	0.100	0.100	pH Units	1	10-Jun-2020 14:15
Temp Deg C @pH	21.9	H	0	0	°C	1	10-Jun-2020 14:15

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: WW-1620-DRUM02-20200605
 Collection Date: 05-Jun-2020 11:40

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-02
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
1,1,1-Trichloroethane	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
1,1,2,2-Tetrachloroethane	U		0.00050	0.0010	mg/L	1	13-Jun-2020 15:57
1,1,2-Trichloroethane	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
1,1-Dichloroethane	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
1,1-Dichloroethene	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
1,2-Dichlorobenzene	U		0.00050	0.0010	mg/L	1	13-Jun-2020 15:57
1,2-Dichloroethane	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
1,2-Dichloropropane	U		0.00050	0.0010	mg/L	1	13-Jun-2020 15:57
1,3-Dichlorobenzene	U		0.00040	0.0010	mg/L	1	13-Jun-2020 15:57
1,4-Dichlorobenzene	U		0.00040	0.0010	mg/L	1	13-Jun-2020 15:57
2-Butanone	U		0.00050	0.0020	mg/L	1	13-Jun-2020 15:57
2-Hexanone	U		0.0010	0.0020	mg/L	1	13-Jun-2020 15:57
4-Methyl-2-pentanone	U		0.00070	0.0020	mg/L	1	13-Jun-2020 15:57
Acetone	U		0.0020	0.0020	mg/L	1	13-Jun-2020 15:57
Benzene	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Bromochloromethane	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Bromodichloromethane	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Bromoform	U		0.00040	0.0010	mg/L	1	13-Jun-2020 15:57
Bromomethane	U		0.00040	0.0010	mg/L	1	13-Jun-2020 15:57
Carbon disulfide	U		0.00060	0.0020	mg/L	1	13-Jun-2020 15:57
Carbon tetrachloride	U		0.00050	0.0010	mg/L	1	13-Jun-2020 15:57
Chlorobenzene	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
Chloroethane	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
Chloroform	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Chloromethane	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
cis-1,2-Dichloroethene	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
cis-1,3-Dichloropropene	U		0.00010	0.0010	mg/L	1	13-Jun-2020 15:57
Dibromochloromethane	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
Ethylbenzene	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
m,p-Xylene	U		0.00050	0.0020	mg/L	1	13-Jun-2020 15:57
Methylene chloride	U		0.0010	0.0020	mg/L	1	13-Jun-2020 15:57
o-Xylene	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
Styrene	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
Tetrachloroethene	0.00089	J	0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
Toluene	0.0025		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
trans-1,2-Dichloroethene	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
trans-1,3-Dichloropropene	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Trichloroethene	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Vinyl acetate	U		0.00050	0.0010	mg/L	1	13-Jun-2020 15:57

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: WW-1620-DRUM02-20200605
 Collection Date: 05-Jun-2020 11:40

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-02
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	ML	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: AKP			
Vinyl chloride	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Xylenes, Total	U		0.00030	0.0010	mg/L	1	13-Jun-2020 15:57
1,2-Dichloroethene, Total	U		0.00020	0.0010	mg/L	1	13-Jun-2020 15:57
Surr: 1,2-Dichloroethane-d4	107			70-126	%REC	1	13-Jun-2020 15:57
Surr: 4-Bromofluorobenzene	103			81-113	%REC	1	13-Jun-2020 15:57
Surr: Dibromofluoromethane	104			77-123	%REC	1	13-Jun-2020 15:57
Surr: Toluene-d8	100			82-127	%REC	1	13-Jun-2020 15:57

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: WW-1620-DRUM02-20200605
 Collection Date: 05-Jun-2020 11:40

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-02
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D	Method:SW8270				Prep:SW3510 / 10-Jun-2020		Analyst: GEY
1,2,4-Trichlorobenzene	U		0.000030	0.00020	mg/L	1	12-Jun-2020 16:09
2,4,5-Trichlorophenol	U		0.000057	0.00020	mg/L	1	12-Jun-2020 16:09
2,4,6-Trichlorophenol	U		0.000048	0.00020	mg/L	1	12-Jun-2020 16:09
2,4-Dichlorophenol	U		0.000043	0.00020	mg/L	1	12-Jun-2020 16:09
2,4-Dimethylphenol	U		0.000040	0.00020	mg/L	1	12-Jun-2020 16:09
2,4-Dinitrophenol	U		0.00010	0.0010	mg/L	1	12-Jun-2020 16:09
2,4-Dinitrotoluene	U		0.000058	0.00020	mg/L	1	12-Jun-2020 16:09
2,6-Dinitrotoluene	U		0.000042	0.00020	mg/L	1	12-Jun-2020 16:09
2-Chloronaphthalene	U		0.000021	0.00020	mg/L	1	12-Jun-2020 16:09
2-Chlorophenol	U		0.000036	0.00020	mg/L	1	12-Jun-2020 16:09
2-Methylnaphthalene	U		0.000019	0.00010	mg/L	1	12-Jun-2020 16:09
2-Methylphenol	U		0.000045	0.00020	mg/L	1	12-Jun-2020 16:09
2-Nitroaniline	U		0.000041	0.00020	mg/L	1	12-Jun-2020 16:09
2-Nitrophenol	U		0.000034	0.00020	mg/L	1	12-Jun-2020 16:09
3&4-Methylphenol	U		0.000036	0.00020	mg/L	1	12-Jun-2020 16:09
3,3'-Dichlorobenzidine	U		0.000044	0.00020	mg/L	1	12-Jun-2020 16:09
3-Nitroaniline	U		0.000049	0.00020	mg/L	1	12-Jun-2020 16:09
4,6-Dinitro-2-methylphenol	U		0.000020	0.00020	mg/L	1	12-Jun-2020 16:09
4-Bromophenyl phenyl ether	U		0.000051	0.00020	mg/L	1	12-Jun-2020 16:09
4-Chloro-3-methylphenol	U		0.000032	0.00020	mg/L	1	12-Jun-2020 16:09
4-Chloroaniline	U		0.000039	0.00020	mg/L	1	12-Jun-2020 16:09
4-Chlorophenyl phenyl ether	U		0.000044	0.00020	mg/L	1	12-Jun-2020 16:09
4-Nitroaniline	U		0.000035	0.00020	mg/L	1	12-Jun-2020 16:09
4-Nitrophenol	U		0.000047	0.0010	mg/L	1	12-Jun-2020 16:09
Acenaphthene	U		0.000027	0.00010	mg/L	1	12-Jun-2020 16:09
Acenaphthylene	U		0.000015	0.00010	mg/L	1	12-Jun-2020 16:09
Anthracene	U		0.000014	0.00010	mg/L	1	12-Jun-2020 16:09
Benz(a)anthracene	U		0.000050	0.00010	mg/L	1	12-Jun-2020 16:09
Benzidine	U		0.00010	0.00020	mg/L	1	12-Jun-2020 16:09
Benzo(a)pyrene	U		0.000020	0.00010	mg/L	1	12-Jun-2020 16:09
Benzo(b)fluoranthene	U		0.000023	0.00010	mg/L	1	12-Jun-2020 16:09
Benzo(g,h,i)perylene	U		0.000014	0.00010	mg/L	1	12-Jun-2020 16:09
Benzo(k)fluoranthene	U		0.000019	0.00010	mg/L	1	12-Jun-2020 16:09
Benzyl alcohol	U		0.000054	0.00020	mg/L	1	12-Jun-2020 16:09
Bis(2-chloroethoxy)methane	U		0.000030	0.00020	mg/L	1	12-Jun-2020 16:09
Bis(2-chloroethyl)ether	U		0.000026	0.00020	mg/L	1	12-Jun-2020 16:09
Bis(2-chloroisopropyl)ether	U		0.000070	0.00020	mg/L	1	12-Jun-2020 16:09
Bis(2-ethylhexyl)phthalate	U		0.000037	0.00020	mg/L	1	12-Jun-2020 16:09
Butyl benzyl phthalate	U		0.000019	0.00020	mg/L	1	12-Jun-2020 16:09

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: WW-1620-DRUM02-20200605
 Collection Date: 05-Jun-2020 11:40

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-02
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MQL	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW-LEVEL SEMIVOLATILES BY 8270D		Method:SW8270		Prep:SW3510 / 10-Jun-2020		Analyst: GEY	
Carbazole	U		0.000025	0.00020	mg/L	1	12-Jun-2020 16:09
Chrysene	U		0.000021	0.00010	mg/L	1	12-Jun-2020 16:09
Di-n-butyl phthalate	U		0.000020	0.00020	mg/L	1	12-Jun-2020 16:09
Di-n-octyl phthalate	0.00015	J	0.000020	0.00020	mg/L	1	12-Jun-2020 16:09
Dibenz(a,h)anthracene	U		0.000024	0.00010	mg/L	1	12-Jun-2020 16:09
Dibenzofuran	U		0.000020	0.00010	mg/L	1	12-Jun-2020 16:09
Diethyl phthalate	U		0.000030	0.00020	mg/L	1	12-Jun-2020 16:09
Dimethyl phthalate	U		0.000041	0.00020	mg/L	1	12-Jun-2020 16:09
Fluoranthene	0.000019	J	0.000010	0.00010	mg/L	1	12-Jun-2020 16:09
Fluorene	U		0.000030	0.00010	mg/L	1	12-Jun-2020 16:09
Hexachlorobenzene	U		0.000044	0.00020	mg/L	1	12-Jun-2020 16:09
Hexachlorobutadiene	U		0.000030	0.00020	mg/L	1	12-Jun-2020 16:09
Hexachlorocyclopentadiene	U		0.000030	0.00020	mg/L	1	12-Jun-2020 16:09
Hexachloroethane	U		0.000059	0.00020	mg/L	1	12-Jun-2020 16:09
Indeno(1,2,3-cd)pyrene	U		0.000022	0.00010	mg/L	1	12-Jun-2020 16:09
Isophorone	U		0.000025	0.00020	mg/L	1	12-Jun-2020 16:09
N-Nitrosodi-n-propylamine	U		0.000032	0.00020	mg/L	1	12-Jun-2020 16:09
N-Nitrosodimethylamine	U		0.000010	0.00020	mg/L	1	12-Jun-2020 16:09
N-Nitrosodiphenylamine	U		0.000025	0.00020	mg/L	1	12-Jun-2020 16:09
Naphthalene	U		0.000020	0.00010	mg/L	1	12-Jun-2020 16:09
Nitrobenzene	U		0.000024	0.00020	mg/L	1	12-Jun-2020 16:09
Pentachlorophenol	U		0.000079	0.00020	mg/L	1	12-Jun-2020 16:09
Phenanthrene	U		0.000021	0.00010	mg/L	1	12-Jun-2020 16:09
Phenol	U		0.000035	0.00020	mg/L	1	12-Jun-2020 16:09
Pyrene	0.000033	J	0.000019	0.00010	mg/L	1	12-Jun-2020 16:09
Pyridine	U		0.000030	0.0010	mg/L	1	12-Jun-2020 16:09
<i>Surr: 2,4,6-Tribromophenol</i>	<i>89.7</i>			<i>34-129</i>	<i>%REC</i>	<i>1</i>	<i>12-Jun-2020 16:09</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>56.5</i>			<i>40-125</i>	<i>%REC</i>	<i>1</i>	<i>12-Jun-2020 16:09</i>
<i>Surr: 2-Fluorophenol</i>	<i>73.9</i>			<i>20-120</i>	<i>%REC</i>	<i>1</i>	<i>12-Jun-2020 16:09</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>78.5</i>			<i>40-135</i>	<i>%REC</i>	<i>1</i>	<i>12-Jun-2020 16:09</i>
<i>Surr: Nitrobenzene-d5</i>	<i>62.4</i>			<i>41-120</i>	<i>%REC</i>	<i>1</i>	<i>12-Jun-2020 16:09</i>
<i>Surr: Phenol-d6</i>	<i>79.6</i>			<i>20-120</i>	<i>%REC</i>	<i>1</i>	<i>12-Jun-2020 16:09</i>
LOW-LEVEL TEXAS TPH BY TX1005		Method:TX1005		Prep:TX1005PR / 09-Jun-2020		Analyst: MBG	
nC6 to nC12	U		0.19	0.49	mg/L	1	11-Jun-2020 13:13
>nC12 to nC28	U		0.19	0.49	mg/L	1	11-Jun-2020 13:13
>nC28 to nC35	U		0.19	0.49	mg/L	1	11-Jun-2020 13:13
Total Petroleum Hydrocarbon	U		0.19	0.49	mg/L	1	11-Jun-2020 13:13
<i>Surr: 2-Fluorobiphenyl</i>	<i>76.2</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>11-Jun-2020 13:13</i>
<i>Surr: Trifluoromethyl benzene</i>	<i>89.3</i>			<i>70-130</i>	<i>%REC</i>	<i>1</i>	<i>11-Jun-2020 13:13</i>

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

Client: Golder Associates Inc.
 Project: Houston TX-Wood Preserving Works IDW
 Sample ID: WW-1620-DRUM02-20200605
 Collection Date: 05-Jun-2020 11:40

ANALYTICAL REPORT
 WorkOrder:HS20060314
 Lab ID:HS20060314-02
 Matrix:Water

ANALYSES	RESULT	QUAL	SDL	MLL	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020		Prep:SW3010A / 11-Jun-2020		Analyst: JC	
Antimony	U		0.000400	0.00200	mg/L	1	12-Jun-2020 22:16
Arsenic	0.00171	J	0.000400	0.00200	mg/L	1	12-Jun-2020 22:16
Barium	0.203		0.00190	0.00400	mg/L	1	12-Jun-2020 22:16
Beryllium	U		0.000200	0.00200	mg/L	1	12-Jun-2020 22:16
Cadmium	U		0.000200	0.00200	mg/L	1	12-Jun-2020 22:16
Chromium	0.000734	J	0.000400	0.00400	mg/L	1	12-Jun-2020 22:16
Lead	0.00219		0.000600	0.00200	mg/L	1	12-Jun-2020 22:16
Nickel	0.00147	J	0.000600	0.00200	mg/L	1	12-Jun-2020 22:16
Selenium	U		0.00110	0.00200	mg/L	1	12-Jun-2020 22:16
Silver	U		0.000200	0.00200	mg/L	1	12-Jun-2020 22:16
MERCURY BY SW7470A		Method:SW7470		Prep:SW7470 / 12-Jun-2020		Analyst: FO	
Mercury	U		0.0000300	0.000200	mg/L	1	12-Jun-2020 16:55
FLASH POINT BY PENSKEY-MARTENS SW1010A		Method:SW1010				Analyst: TH	
Ignitability	> 212		70.0	70.0	°F	1	11-Jun-2020 08:00
PH BY SW9040C		Method:SW9040C				Analyst: KVL	
pH	6.38	H	0.100	0.100	pH Units	1	11-Jun-2020 11:30
Temp Deg C @pH	23.4	H	0	0	DEG C	1	11-Jun-2020 11:30

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

Weight / Prep Log

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

Batch ID: 3770 **Start Date:** 08 Jun 2020 07:31 **End Date:** 08 Jun 2020 07:31
Method: VOLATILES BY SW8260C

Sample ID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS20060314-01	1	5.111 (g)	5 (mL)	0.98	Bulk (5030B)

Batch ID: 154215 **Start Date:** 08 Jun 2020 11:00 **End Date:** 08 Jun 2020 13:00
Method: MERCURY PREP - SOLID - 7471B **Prep Code:** HG_S_LOWPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-01		0.5881 (grams)	40 (mL)	68.02

Batch ID: 154268 **Start Date:** 09 Jun 2020 11:00 **End Date:** 09 Jun 2020 14:00
Method: TX 1005 PREP **Prep Code:** TX 1005_S PR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-01		11.92 (g)	10 (mL)	0.8389

Batch ID: 154287 **Start Date:** 09 Jun 2020 15:30 **End Date:** 09 Jun 2020 18:00
Method: SV SOXHLET EXTRACT-LOWLEVEL-SW3541 **Prep Code:** 3541_B_LOW

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-01		30.17 (g)	1 (mL)	0.03315

Batch ID: 154295 **Start Date:** 09 Jun 2020 13:00 **End Date:** 09 Jun 2020 18:30
Method: TX 1005 PREP **Prep Code:** TX 1005_W PR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-02		30.82 (g)	3 (mL)	0.09734

Batch ID: 154335 **Start Date:** 10 Jun 2020 12:00 **End Date:** 10 Jun 2020 18:30
Method: SV AQ SEP FUN EXTRACT-LOWLEV - 3510C **Prep Code:** 3510_B_LOW

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-02	1	1000 (mL)	1 (mL)	0.001

Batch ID: 154341 **Start Date:** 11 Jun 2020 08:30 **End Date:** 11 Jun 2020 14:30
Method: METALS PREP - SOLIDS - SW3050B **Prep Code:** 3050_I_LOW

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-01		0.5158 (g)	50 (mL)	96.94

Batch ID: 154388 **Start Date:** 11 Jun 2020 15:00 **End Date:** 11 Jun 2020 18:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-02		10 (mL)	10 (mL)	1

Weight / Prep Log

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

Batch ID: 154415 **Start Date:** 12 Jun 2020 10:30 **End Date:** 12 Jun 2020 12:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20060314-02		10 (mL)	10 (mL)	1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 154215 (0)		Test Name : MERCURY BY SW7471B			Matrix: Solid	
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30		08 Jun 2020 11:00	08 Jun 2020 19:09	1
Batch ID: 154268 (0)		Test Name : TEXAS TPH BY TX1005			Matrix: Solid	
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30		09 Jun 2020 11:00	09 Jun 2020 22:21	1
Batch ID: 154287 (0)		Test Name : LOW-LEVEL SEMIVOLATILES BY 8270D			Matrix: Solid	
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30		09 Jun 2020 15:30	16 Jun 2020 15:57	10
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30		09 Jun 2020 15:30	15 Jun 2020 20:04	1
Batch ID: 154295 (0)		Test Name : LOW-LEVEL TEXAS TPH BY TX1005			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40		09 Jun 2020 13:00	11 Jun 2020 13:13	1
Batch ID: 154335 (0)		Test Name : LOW-LEVEL SEMIVOLATILES BY 8270D			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40		10 Jun 2020 12:00	12 Jun 2020 16:09	1
Batch ID: 154341 (0)		Test Name : METALS BY SW6020A			Matrix: Solid	
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30		11 Jun 2020 14:30	11 Jun 2020 17:52	1
Batch ID: 154388 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40		11 Jun 2020 18:30	12 Jun 2020 22:16	1
Batch ID: 154415 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40		12 Jun 2020 10:30	12 Jun 2020 16:55	1
Batch ID: R362887 (0)		Test Name : VOLATILES BY SW8260C			Matrix: Solid	
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30			09 Jun 2020 13:54	1
Batch ID: R362991 (0)		Test Name : PH SOIL BY SW9045D			Matrix: Solid	
HS20060314-01	SO-1620-DRUM01-20200605	05 Jun 2020 11:30			10 Jun 2020 14:15	1
Batch ID: R363027 (0)		Test Name : FLASH POINT BY PENSKY-MARTENS SW1010A			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40			11 Jun 2020 08:00	1
Batch ID: R363048 (0)		Test Name : PH BY SW9040C			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40			11 Jun 2020 11:30	1
Batch ID: R363212 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS20060314-02	WW-1620-DRUM02-20200605	05 Jun 2020 11:40			13 Jun 2020 15:57	1

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154268 (0)		Instrument: FID-10		Method: TEXAS TPH BY TX1005						
MBLK	Sample ID: MBLK-154268	Units: mg/Kg			Analysis Date: 09-Jun-2020 18:55					
Client ID:	Run ID: FID-10_362948	SeqNo: 5612645		PrepDate: 09-Jun-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	U	50								
>nC12 to nC28	U	50								
>nC28 to nC35	U	50								
Total Petroleum Hydrocarbon	U	50								
<i>Surr: 2-Fluorobiphenyl</i>	19.08	0	25	0	76.3	70 - 130				
<i>Surr: Trifluoromethyl benzene</i>	20.55	0	25	0	82.2	70 - 130				
LCS	Sample ID: LCS-154268	Units: mg/Kg			Analysis Date: 09-Jun-2020 19:25					
Client ID:	Run ID: FID-10_362948	SeqNo: 5612646		PrepDate: 09-Jun-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	203.3	50	250	0	81.3	75 - 125				
>nC12 to nC28	242.1	50	250	0	96.8	75 - 125				
<i>Surr: 2-Fluorobiphenyl</i>	23.02	0	25	0	92.1	70 - 130				
<i>Surr: Trifluoromethyl benzene</i>	22.32	0	25	0	89.3	70 - 130				
LCSD	Sample ID: LCSD-154268	Units: mg/Kg			Analysis Date: 09-Jun-2020 19:54					
Client ID:	Run ID: FID-10_362948	SeqNo: 5612647		PrepDate: 09-Jun-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
nC6 to nC12	202.3	50	250	0	80.9	75 - 125	203.3	0.506	20	
>nC12 to nC28	240.7	50	250	0	96.3	75 - 125	242.1	0.547	20	
<i>Surr: 2-Fluorobiphenyl</i>	22.88	0	25	0	91.5	70 - 130	23.02	0.608	20	
<i>Surr: Trifluoromethyl benzene</i>	22.32	0	25	0	89.3	70 - 130	22.32	0.0184	20	

The following samples were analyzed in this batch: HS20060314-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154295 (0)		Instrument: FID-13		Method: LOW-LEVEL TEXAS TPH BY TX1005						
MBLK	Sample ID: MBLK-154295	Units: mg/L			Analysis Date: 11-Jun-2020 08:24					
Client ID:		Run ID: FID-13_363070		SeqNo: 5615387		PrepDate: 09-Jun-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	U	0.50								
>nC12 to nC28	U	0.50								
>nC28 to nC35	U	0.50								
Total Petroleum Hydrocarbon	U	0.50								
Surr: 2-Fluorobiphenyl	1.789	0	2.5	0	71.5	70 - 130				
Surr: Trifluoromethyl benzene	2	0	2.5	0	80.0	70 - 130				
LCS	Sample ID: LCS-154295	Units: mg/L			Analysis Date: 11-Jun-2020 08:53					
Client ID:		Run ID: FID-13_363070		SeqNo: 5615388		PrepDate: 09-Jun-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	24.8	0.50	25	0	99.2	75 - 125				
>nC12 to nC28	23.54	0.50	25	0	94.2	75 - 125				
Surr: 2-Fluorobiphenyl	2.321	0	2.5	0	92.8	70 - 130				
Surr: Trifluoromethyl benzene	2.253	0	2.5	0	90.1	70 - 130				
LCSD	Sample ID: LCSD-154295	Units: mg/L			Analysis Date: 11-Jun-2020 09:51					
Client ID:		Run ID: FID-13_363070		SeqNo: 5615389		PrepDate: 09-Jun-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	23.43	0.50	25	0	93.7	75 - 125	24.8	5.68	20	
>nC12 to nC28	23.17	0.50	25	0	92.7	75 - 125	23.54	1.56	20	
Surr: 2-Fluorobiphenyl	2.334	0	2.5	0	93.4	70 - 130	2.321	0.578	20	
Surr: Trifluoromethyl benzene	2.2	0	2.5	0	88.0	70 - 130	2.253	2.37	20	
MS	Sample ID: HS20060316-01MS	Units: mg/L			Analysis Date: 11-Jun-2020 10:49					
Client ID:		Run ID: FID-13_363070		SeqNo: 5615394		PrepDate: 09-Jun-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
nC6 to nC12	43.71	0.49	48.64	3.984	81.7	75 - 125				
>nC12 to nC28	40.89	0.49	48.64	0.3193	83.4	75 - 125				
Surr: 2-Fluorobiphenyl	3.466	0	4.864	0	71.3	70 - 130				
Surr: Trifluoromethyl benzene	3.422	0	4.864	0	70.4	70 - 130				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154295 (0) **Instrument:** FID-13 **Method:** LOW-LEVEL TEXAS TPH BY TX1005

MSD Sample ID: **HS20060316-01MSD** Units: **mg/L** Analysis Date: **11-Jun-2020 11:18**
 Client ID: Run ID: **FID-13_363070** SeqNo: **5615392** PrepDate: **09-Jun-2020** DF: **1**
 Analyte Result MQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

nC6 to nC12	30.65	0.50	24.84	3.984	107	75 - 125	43.71	35.1	20	R
>nC12 to nC28	28.21	0.50	24.84	0.3193	112	75 - 125	40.89	36.7	20	R
Surr: 2-Fluorobiphenyl	2.529	0	2.484	0	102	70 - 130	3.466	31.3	20	R
Surr: Trifluoromethyl benzene	2.444	0	2.484	0	98.4	70 - 130	3.422	33.3	20	R

The following samples were analyzed in this batch: HS20060314-02

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154215 (0)	Instrument: HG03	Method: MERCURY BY SW7471B
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MBLK	Sample ID: MBLK-154215	Units: ug/Kg	Analysis Date: 08-Jun-2020 18:28							
Client ID:	Run ID: HG03_362852	SeqNo: 5610803	PrepDate: 08-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury U 3.32

LCS	Sample ID: LCS-154215	Units: ug/Kg	Analysis Date: 08-Jun-2020 18:30							
Client ID:	Run ID: HG03_362852	SeqNo: 5610804	PrepDate: 08-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 326 3.32 333.3 0 97.8 80 - 120

MS	Sample ID: HS20060179-14MS	Units: ug/Kg	Analysis Date: 08-Jun-2020 18:34							
Client ID:	Run ID: HG03_362852	SeqNo: 5610806	PrepDate: 08-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 335.6 3.46 346.7 3.058 95.9 80 - 120

MSD	Sample ID: HS20060179-14MSD	Units: ug/Kg	Analysis Date: 08-Jun-2020 18:35							
Client ID:	Run ID: HG03_362852	SeqNo: 5610807	PrepDate: 08-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 352.2 3.48 348.7 3.058 100 80 - 120 335.6 4.82 20

The following samples were analyzed in this batch: HS20060314-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154341 (0)		Instrument: ICPMS04		Method: METALS BY SW6020A					
MBLK	Sample ID: MBLK-154341	Units: mg/Kg			Analysis Date: 11-Jun-2020 16:52				
Client ID:	Run ID: ICPMS04_363067	SeqNo: 5616243		PrepDate: 11-Jun-2020		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Antimony	U	0.507							
Arsenic	U	0.507							
Barium	U	0.507							
Beryllium	U	0.507							
Cadmium	U	0.507							
Chromium	0.05575	0.507							J
Lead	U	0.507							
Nickel	0.08656	0.507							J
Selenium	U	0.507							
Silver	U	0.507							

LCS	Sample ID: LCS-154341	Units: mg/Kg			Analysis Date: 11-Jun-2020 16:54				
Client ID:	Run ID: ICPMS04_363067	SeqNo: 5616244		PrepDate: 11-Jun-2020		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Antimony	9.911	0.515	10.31	0	96.1	80 - 120			
Arsenic	9.853	0.515	10.31	0	95.6	80 - 120			
Barium	9.683	0.515	10.31	0	93.9	80 - 120			
Beryllium	9.18	0.515	10.31	0	89.0	80 - 120			
Cadmium	9.923	0.515	10.31	0	96.3	80 - 120			
Chromium	10.07	0.515	10.31	0	97.7	80 - 120			
Lead	10.5	0.515	10.31	0	102	80 - 120			
Nickel	10.28	0.515	10.31	0	99.7	80 - 120			
Selenium	9.887	0.515	10.31	0	95.9	80 - 120			
Silver	10.71	0.515	10.31	0	104	80 - 120			

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154341 (0)										
Instrument: ICPMS04				Method: METALS BY SW6020A						
MS										
Sample ID: HS20060410-02MS		Units: mg/Kg			Analysis Date: 11-Jun-2020 17:00					
Client ID:		Run ID: ICPMS04_363067			SeqNo: 5616247		PrepDate: 11-Jun-2020		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	1.571	0.490	9.806	0.1516	14.5	75 - 125				S
Arsenic	12.04	0.490	9.806	3.415	87.9	75 - 125				
Barium	65.75	0.490	9.806	49.34	167	75 - 125				SO
Beryllium	10.27	0.490	9.806	0.7325	97.2	75 - 125				
Cadmium	10.12	0.490	9.806	0.08065	102	75 - 125				
Chromium	17.05	0.490	9.806	7.159	101	75 - 125				
Lead	19.95	0.490	9.806	9.336	108	75 - 125				
Nickel	15.54	0.490	9.806	6.252	94.7	75 - 125				
Selenium	10.5	0.490	9.806	1.258	94.2	75 - 125				
Silver	10.49	0.490	9.806	0.03722	107	75 - 125				

MSD										
Sample ID: HS20060410-02MSD		Units: mg/Kg			Analysis Date: 11-Jun-2020 17:02					
Client ID:		Run ID: ICPMS04_363067			SeqNo: 5616248		PrepDate: 11-Jun-2020		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	1.397	0.476	9.52	0.1516	13.1	75 - 125	1.571	11.7	20	S
Arsenic	11.67	0.476	9.52	3.415	86.7	75 - 125	12.04	3.11	20	
Barium	62.47	0.476	9.52	49.34	138	75 - 125	65.75	5.12	20	SO
Beryllium	9.607	0.476	9.52	0.7325	93.2	75 - 125	10.27	6.65	20	
Cadmium	9.121	0.476	9.52	0.08065	95.0	75 - 125	10.12	10.3	20	
Chromium	17.92	0.476	9.52	7.159	113	75 - 125	17.05	4.98	20	
Lead	18.79	0.476	9.52	9.336	99.3	75 - 125	19.95	5.95	20	
Nickel	15.99	0.476	9.52	6.252	102	75 - 125	15.54	2.91	20	
Selenium	10.01	0.476	9.52	1.258	91.9	75 - 125	10.5	4.76	20	
Silver	9.531	0.476	9.52	0.03722	99.7	75 - 125	10.49	9.61	20	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154341 (0)		Instrument: ICPMS04		Method: METALS BY SW6020A						
PDS	Sample ID: HS20060410-02PDS	Units: mg/Kg			Analysis Date: 11-Jun-2020 17:04					
Client ID:	Run ID: ICPMS04_363067	SeqNo: 5616249		PrepDate: 11-Jun-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	8.785	0.485	9.694	0.1516	89.1	75 - 125				
Arsenic	12.47	0.485	9.694	3.415	93.5	75 - 125				
Barium	59.16	0.485	9.694	49.34	101	75 - 125				O
Beryllium	9.414	0.485	9.694	0.7325	89.6	75 - 125				
Cadmium	9.133	0.485	9.694	0.08065	93.4	75 - 125				
Chromium	16.85	0.485	9.694	7.159	99.9	75 - 125				
Lead	18.39	0.485	9.694	9.336	93.4	75 - 125				
Nickel	15.36	0.485	9.694	6.252	94.0	75 - 125				
Selenium	10.33	0.485	9.694	1.258	93.6	75 - 125				
Silver	9.556	0.485	9.694	0.03722	98.2	75 - 125				

SD	Sample ID: HS20060410-02SD	Units: mg/Kg			Analysis Date: 11-Jun-2020 16:58					
Client ID:	Run ID: ICPMS04_363067	SeqNo: 5616246		PrepDate: 11-Jun-2020		DF: 5				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit	Qual
Antimony	U	2.42					0.1516	0	10	
Arsenic	3.444	2.42					3.415	0.829	10	
Barium	48.69	2.42					49.34	1.31	10	
Beryllium	0.7313	2.42					0.7325	0	10	J
Cadmium	U	2.42					0.08065	0	10	
Chromium	7.349	2.42					7.159	2.65	10	
Lead	8.952	2.42					9.336	4.11	10	
Nickel	6.681	2.42					6.252	6.87	10	
Selenium	1.07	2.42					1.258	0	10	J
Silver	U	2.42					0.03722	0	10	

The following samples were analyzed in this batch: HS20060314-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154388 (0) **Instrument:** ICPMS04 **Method:** ICP-MS METALS BY SW6020A

MBLK	Sample ID: MBLKF1-154388	Units: mg/L			Analysis Date: 12-Jun-2020 20:54					
Client ID:	Run ID: ICPMS04_363166	SeqNo: 5618070	PrepDate: 11-Jun-2020	DF: 1						
Analyte	Result	SQL	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								

MBLK	Sample ID: MBLK-154388	Units: mg/L			Analysis Date: 12-Jun-2020 20:52					
Client ID:	Run ID: ICPMS04_363166	SeqNo: 5618069	PrepDate: 11-Jun-2020	DF: 1						
Analyte	Result	SQL	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								

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154388 (0) **Instrument:** ICPMS04 **Method:** ICP-MS METALS BY SW6020A

LCS		Sample ID: LCS-154388			Units: mg/L		Analysis Date: 15-Jun-2020 12:58			
Client ID:		Run ID: ICPMS05_363236			SeqNo: 5619063		PrepDate: 11-Jun-2020		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0434	0.00200	0.05	0	86.8	80 - 120				
Arsenic	0.04423	0.00200	0.05	0	88.5	80 - 120				
Barium	0.04294	0.00400	0.05	0	85.9	80 - 120				
Beryllium	0.04169	0.00200	0.05	0	83.4	80 - 120				
Cadmium	0.04493	0.00200	0.05	0	89.9	80 - 120				
Chromium	0.04362	0.00400	0.05	0	87.2	80 - 120				
Lead	0.04169	0.00200	0.05	0	83.4	80 - 120				
Nickel	0.0447	0.00200	0.05	0	89.4	80 - 120				
Selenium	0.04544	0.00200	0.05	0	90.9	80 - 120				
Silver	0.04453	0.00200	0.05	0	89.1	80 - 120				

MS		Sample ID: HS20060422-01MS			Units: mg/L		Analysis Date: 15-Jun-2020 13:05			
Client ID:		Run ID: ICPMS05_363236			SeqNo: 5619056		PrepDate: 11-Jun-2020		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04665	0.00200	0.05	0	93.3	80 - 120				
Arsenic	0.05472	0.00200	0.05	0.0071	95.2	80 - 120				
Barium	0.2832	0.00400	0.05	0.2169	133	80 - 120				SO
Beryllium	0.04871	0.00200	0.05	0	97.4	80 - 120				
Cadmium	0.04584	0.00200	0.05	0	91.7	80 - 120				
Chromium	0.04498	0.00400	0.05	0	90.0	80 - 120				
Lead	0.04449	0.00200	0.05	0	89.0	80 - 120				
Nickel	0.04657	0.00200	0.05	0.00122	90.7	80 - 120				
Selenium	0.04877	0.00200	0.05	0.002274	93.0	80 - 120				
Silver	0.04466	0.00200	0.05	0	89.3	80 - 120				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154388 (0)		Instrument: ICPMS04			Method: ICP-MS METALS BY SW6020A					
MSD	Sample ID: HS20060422-01MSD	Units: mg/L			Analysis Date: 15-Jun-2020 13:08					
Client ID:	Run ID: ICPMS05_363236	SeqNo: 5619057		PrepDate: 11-Jun-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04584	0.00200	0.05	0	91.7	80 - 120	0.04665	1.75	20	
Arsenic	0.05354	0.00200	0.05	0.0071	92.9	80 - 120	0.05472	2.18	20	
Barium	0.2731	0.00400	0.05	0.2169	112	80 - 120	0.2832	3.64	20	O
Beryllium	0.04675	0.00200	0.05	0	93.5	80 - 120	0.04871	4.11	20	
Cadmium	0.04449	0.00200	0.05	0	89.0	80 - 120	0.04584	2.99	20	
Chromium	0.04407	0.00400	0.05	0	88.1	80 - 120	0.04498	2.05	20	
Lead	0.043	0.00200	0.05	0	86.0	80 - 120	0.04449	3.41	20	
Nickel	0.04551	0.00200	0.05	0.00122	88.6	80 - 120	0.04657	2.3	20	
Selenium	0.04768	0.00200	0.05	0.002274	90.8	80 - 120	0.04877	2.26	20	
Silver	0.04307	0.00200	0.05	0	86.1	80 - 120	0.04466	3.62	20	

PDS	Sample ID: HS20060422-01PDS	Units: mg/L			Analysis Date: 15-Jun-2020 13:10					
Client ID:	Run ID: ICPMS05_363236	SeqNo: 5619058		PrepDate: 11-Jun-2020		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.08564	0.00200	0.1	0	85.6	75 - 125				
Arsenic	0.09644	0.00200	0.1	0.0071	89.3	75 - 125				
Barium	0.3024	0.00400	0.1	0.2169	85.5	75 - 125				
Beryllium	0.08342	0.00200	0.1	0	83.4	75 - 125				
Cadmium	0.0853	0.00200	0.1	0	85.3	75 - 125				
Chromium	0.08504	0.00400	0.1	0	85.0	75 - 125				
Lead	0.08444	0.00200	0.1	0	84.4	75 - 125				
Nickel	0.08625	0.00200	0.1	0.00122	85.0	75 - 125				
Selenium	0.09076	0.00200	0.1	0.002274	88.5	75 - 125				
Silver	0.08307	0.00200	0.1	0	83.1	75 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154388 (0) **Instrument:** ICPMS04 **Method:** ICP-MS METALS BY SW6020A

SD	Sample ID: HS20060422-01SD	Units: mg/L			Analysis Date: 15-Jun-2020 13:03					
Client ID:	Run ID: ICPMS05_363236	SeqNo: 5619055	PrepDate: 11-Jun-2020	DF: 5						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	U	0.0100					0	0	10	
Arsenic	0.007351	0.0100					0.0071	0	10	J
Barium	0.2241	0.0200					0.2169	3.31	10	
Beryllium	U	0.0100					0	0	10	
Cadmium	U	0.0100					0	0	10	
Chromium	U	0.0200					0	0	10	
Lead	U	0.0100					0	0	10	
Nickel	U	0.0100					0.00122	0	10	
Selenium	U	0.0100					0.002274	0	10	
Silver	U	0.0100					0	0	10	

The following samples were analyzed in this batch:

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154415 (0)	Instrument: HG03	Method: MERCURY BY SW7470A
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MBLK	Sample ID: MBLK-154415	Units: mg/L	Analysis Date: 12-Jun-2020 16:28							
Client ID:	Run ID: HG03_363173	SeqNo: 5617941	PrepDate: 12-Jun-2020 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-154415	Units: mg/L	Analysis Date: 12-Jun-2020 16:30							
Client ID:	Run ID: HG03_363173	SeqNo: 5617942	PrepDate: 12-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00496 0.000200 0.005 0 99.2 80 - 120

MS	Sample ID: HS20060295-04MS	Units: mg/L	Analysis Date: 12-Jun-2020 16:33							
Client ID:	Run ID: HG03_363173	SeqNo: 5617944	PrepDate: 12-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00509 0.000200 0.005 0.000007 102 75 - 125

MSD	Sample ID: HS20060295-04MSD	Units: mg/L	Analysis Date: 12-Jun-2020 16:35							
Client ID:	Run ID: HG03_363173	SeqNo: 5617945	PrepDate: 12-Jun-2020 DF: 1							
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00505 0.000200 0.005 0.000007 101 75 - 125 0.00509 0.789 20

The following samples were analyzed in this batch: HS20060314-02

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-154287	Units: ug/Kg			Analysis Date: 15-Jun-2020 15:16					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621017		PrepDate: 09-Jun-2020		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	U	6.6								
2,4,5-Trichlorophenol	U	6.6								
2,4,6-Trichlorophenol	U	6.6								
2,4-Dichlorophenol	U	6.6								
2,4-Dimethylphenol	U	6.6								
2,4-Dinitrophenol	U	13								
2,4-Dinitrotoluene	U	6.6								
2,6-Dinitrotoluene	U	6.6								
2-Chloronaphthalene	U	6.6								
2-Chlorophenol	U	6.6								
2-Methylnaphthalene	U	3.3								
2-Methylphenol	U	6.6								
2-Nitroaniline	U	6.6								
2-Nitrophenol	U	6.6								
3&4-Methylphenol	U	6.6								
3,3'-Dichlorobenzidine	U	6.6								
3-Nitroaniline	U	6.6								
4,6-Dinitro-2-methylphenol	U	6.6								
4-Bromophenyl phenyl ether	U	6.6								
4-Chloro-3-methylphenol	U	6.6								
4-Chloroaniline	U	6.6								
4-Chlorophenyl phenyl ether	U	6.6								
4-Nitroaniline	U	6.6								
4-Nitrophenol	U	13								
Acenaphthene	U	3.3								
Acenaphthylene	U	3.3								
Anthracene	U	3.3								
Benz(a)anthracene	U	3.3								
Benzidine	U	6.6								
Benzo(a)pyrene	U	3.3								
Benzo(b)fluoranthene	U	3.3								
Benzo(g,h,i)perylene	U	3.3								
Benzo(k)fluoranthene	U	3.3								
Benzyl alcohol	U	6.6								

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-154287	Units: ug/Kg			Analysis Date: 15-Jun-2020 15:16					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621017	PrepDate: 09-Jun-2020	DF: 1						
Analyte	Result	SQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	U	6.6								
Bis(2-chloroethyl)ether	U	6.6								
Bis(2-chloroisopropyl)ether	U	6.6								
Bis(2-ethylhexyl)phthalate	U	6.6								
Butyl benzyl phthalate	U	6.6								
Carbazole	U	6.6								
Chrysene	U	3.3								
Dibenz(a,h)anthracene	U	3.3								
Dibenzofuran	U	3.3								
Diethyl phthalate	U	6.6								
Dimethyl phthalate	U	6.6								
Di-n-butyl phthalate	U	6.6								
Di-n-octyl phthalate	U	6.6								
Fluoranthene	U	3.3								
Fluorene	U	3.3								
Hexachlorobenzene	U	6.6								
Hexachlorobutadiene	U	6.6								
Hexachlorocyclopentadiene	U	6.6								
Hexachloroethane	U	6.6								
Indeno(1,2,3-cd)pyrene	U	3.3								
Isophorone	U	6.6								
Naphthalene	U	3.3								
Nitrobenzene	U	6.6								
N-Nitrosodimethylamine	U	6.6								
N-Nitrosodi-n-propylamine	U	6.6								
N-Nitrosodiphenylamine	U	6.6								
Pentachlorophenol	U	6.6								
Phenanthrene	U	3.3								
Phenol	U	6.6								
Pyrene	U	3.3								
Pyridine	U	6.6								
Surr: 2,4,6-Tribromophenol	114.3	0	167	0	68.4	36 - 126				
Surr: 2-Fluorobiphenyl	116.7	0	167	0	69.9	43 - 125				
Surr: 2-Fluorophenol	167.5	0	167	0	100	37 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-154287	Units: ug/Kg			Analysis Date: 15-Jun-2020 15:16					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621017		PrepDate: 09-Jun-2020		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>	130.6	0	167	0	78.2	32 - 125				
<i>Surr: Nitrobenzene-d5</i>	130.9	0	167	0	78.4	37 - 125				
<i>Surr: Phenol-d6</i>	196.6	0	167	0	118	40 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-154287	Units: ug/Kg			Analysis Date: 15-Jun-2020 15:35					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621018		PrepDate: 09-Jun-2020		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,2,4-Trichlorobenzene	98.55	6.6	167	0	59.0	50 - 120				
2,4,5-Trichlorophenol	104.3	6.6	167	0	62.5	45 - 127				
2,4,6-Trichlorophenol	105.5	6.6	167	0	63.2	45 - 130				
2,4-Dichlorophenol	102.5	6.6	167	0	61.3	45 - 125				
2,4-Dimethylphenol	92.69	6.6	167	0	55.5	45 - 120				
2,4-Dinitrophenol	97.29	13	167	0	58.3	10 - 126				
2,4-Dinitrotoluene	106.4	6.6	167	0	63.7	50 - 130				
2,6-Dinitrotoluene	111.4	6.6	167	0	66.7	50 - 125				
2-Chloronaphthalene	118.4	6.6	167	0	70.9	50 - 145				
2-Chlorophenol	116.1	6.6	167	0	69.5	45 - 120				
2-Methylnaphthalene	103	3.3	167	0	61.7	50 - 120				
2-Methylphenol	106	6.6	167	0	63.4	45 - 120				
2-Nitroaniline	135.7	6.6	167	0	81.3	45 - 138				
2-Nitrophenol	108.9	6.6	167	0	65.2	45 - 125				
3&4-Methylphenol	96.67	6.6	167	0	57.9	45 - 120				
3,3'-Dichlorobenzidine	213.4	6.6	167	0	128	15 - 120			S	
3-Nitroaniline	116.8	6.6	167	0	69.9	40 - 120				
4,6-Dinitro-2-methylphenol	117.6	6.6	167	0	70.4	15 - 135				
4-Bromophenyl phenyl ether	108.8	6.6	167	0	65.1	50 - 125				
4-Chloro-3-methylphenol	107.9	6.6	167	0	64.6	45 - 130				
4-Chloroaniline	108.1	6.6	167	0	64.8	20 - 120				
4-Chlorophenyl phenyl ether	102.1	6.6	167	0	61.1	50 - 120				
4-Nitroaniline	112.1	6.6	167	0	67.1	50 - 127				
4-Nitrophenol	101.2	13	167	0	60.6	40 - 147				
Acenaphthene	98.39	3.3	167	0	58.9	50 - 120				
Acenaphthylene	109.6	3.3	167	0	65.6	50 - 120				
Anthracene	110.5	3.3	167	0	66.1	50 - 123				
Benz(a)anthracene	123.4	3.3	167	0	73.9	50 - 131				
Benzdine	80.41	6.6	167	0	48.1	10 - 120				
Benzo(a)pyrene	122.3	3.3	167	0	73.2	50 - 130				
Benzo(b)fluoranthene	132.8	3.3	167	0	79.5	50 - 137				
Benzo(g,h,i)perylene	154.5	3.3	167	0	92.5	50 - 130				
Benzo(k)fluoranthene	139.7	3.3	167	0	83.6	50 - 143				
Benzyl alcohol	108.3	6.6	167	0	64.9	40 - 143				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-154287	Units: ug/Kg			Analysis Date: 15-Jun-2020 15:35					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621018	PrepDate: 09-Jun-2020	DF: 1						
Analyte	Result	SQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	108.3	6.6	167	0	64.9	50 - 120				
Bis(2-chloroethyl)ether	122.8	6.6	167	0	73.5	45 - 127				
Bis(2-chloroisopropyl)ether	146.1	6.6	167	0	87.5	50 - 120				
Bis(2-ethylhexyl)phthalate	128	6.6	167	0	76.6	21 - 148				
Butyl benzyl phthalate	115.9	6.6	167	0	69.4	50 - 136				
Carbazole	155.2	6.6	167	0	92.9	50 - 143				
Chrysene	107.7	3.3	167	0	64.5	50 - 130				
Dibenz(a,h)anthracene	159	3.3	167	0	95.2	50 - 130				
Dibenzofuran	103.8	3.3	167	0	62.1	50 - 125				
Diethyl phthalate	114.2	6.6	167	0	68.4	50 - 125				
Dimethyl phthalate	108	6.6	167	0	64.7	50 - 125				
Di-n-butyl phthalate	117.4	6.6	167	0	70.3	50 - 140				
Di-n-octyl phthalate	132.7	6.6	167	0	79.5	50 - 140				
Fluoranthene	115.8	3.3	167	0	69.4	50 - 131				
Fluorene	107.6	3.3	167	0	64.4	50 - 125				
Hexachlorobenzene	107.8	6.6	167	0	64.5	50 - 124				
Hexachlorobutadiene	106.6	6.6	167	0	63.8	50 - 125				
Hexachlorocyclopentadiene	90.3	6.6	167	0	54.1	45 - 135				
Hexachloroethane	78.55	6.6	167	0	47.0	45 - 125				
Indeno(1,2,3-cd)pyrene	134.8	3.3	167	0	80.7	45 - 139				
Isophorone	118.3	6.6	167	0	70.9	45 - 130				
Naphthalene	105.3	3.3	167	0	63.1	50 - 125				
Nitrobenzene	119.1	6.6	167	0	71.3	50 - 125				
N-Nitrosodimethylamine	125.8	6.6	167	0	75.3	20 - 140				
N-Nitrosodi-n-propylamine	101.3	6.6	167	0	60.7	45 - 120				
N-Nitrosodiphenylamine	110.5	6.6	167	0	66.2	50 - 130				
Pentachlorophenol	79.43	6.6	167	0	47.6	23 - 136				
Phenanthrene	110.7	3.3	167	0	66.3	50 - 125				
Phenol	127.2	6.6	167	0	76.2	45 - 130				
Pyrene	111.3	3.3	167	0	66.6	45 - 130				
Pyridine	112.1	6.6	167	0	67.1	15 - 120				
Surr: 2,4,6-Tribromophenol	111.3	0	167	0	66.7	36 - 126				
Surr: 2-Fluorobiphenyl	96.89	0	167	0	58.0	43 - 125				
Surr: 2-Fluorophenol	109.2	0	167	0	65.4	37 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-154287	Units: ug/Kg			Analysis Date: 15-Jun-2020 15:35					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621018		PrepDate: 09-Jun-2020		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>	99.59	0	167	0	59.6	32 - 125				
<i>Surr: Nitrobenzene-d5</i>	109.4	0	167	0	65.5	37 - 125				
<i>Surr: Phenol-d6</i>	146.2	0	167	0	87.5	40 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MS	Sample ID: HS20060313-35MS	Units: ug/Kg			Analysis Date: 15-Jun-2020 16:14					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621020	PrepDate: 09-Jun-2020	DF: 1						
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	108.5	6.6	166.4	0	65.2	50 - 120				
2,4,5-Trichlorophenol	131	6.6	166.4	0	78.7	45 - 127				
2,4,6-Trichlorophenol	119.1	6.6	166.4	0	71.5	45 - 130				
2,4-Dichlorophenol	119.5	6.6	166.4	0	71.8	45 - 125				
2,4-Dimethylphenol	122	6.6	166.4	0	73.3	45 - 120				
2,4-Dinitrophenol	97.88	13	166.4	0	58.8	10 - 126				
2,4-Dinitrotoluene	122.9	6.6	166.4	0	73.8	50 - 130				
2,6-Dinitrotoluene	133	6.6	166.4	0	79.9	50 - 125				
2-Chloronaphthalene	135	6.6	166.4	0	81.1	50 - 145				
2-Chlorophenol	123.4	6.6	166.4	0	74.2	45 - 120				
2-Methylnaphthalene	117.1	3.3	166.4	0.1708	70.3	50 - 120				
2-Methylphenol	127.6	6.6	166.4	0	76.6	45 - 120				
2-Nitroaniline	188	6.6	166.4	0	113	45 - 138				
2-Nitrophenol	120.4	6.6	166.4	0	72.3	45 - 125				
3&4-Methylphenol	122.7	6.6	166.4	0	73.7	45 - 120				
3,3'-Dichlorobenzidine	172.6	6.6	166.4	0	104	15 - 120				
3-Nitroaniline	123.7	6.6	166.4	0	74.3	40 - 120				
4,6-Dinitro-2-methylphenol	125.1	6.6	166.4	0	75.2	15 - 135				
4-Bromophenyl phenyl ether	125.6	6.6	166.4	0	75.5	50 - 125				
4-Chloro-3-methylphenol	127.2	6.6	166.4	0	76.4	45 - 130				
4-Chloroaniline	107.2	6.6	166.4	0	64.4	20 - 120				
4-Chlorophenyl phenyl ether	106.5	6.6	166.4	0	64.0	50 - 120				
4-Nitroaniline	121	6.6	166.4	0	72.7	50 - 127				
4-Nitrophenol	92.66	13	166.4	0	55.7	40 - 147				
Acenaphthene	112.5	3.3	166.4	0	67.6	50 - 120				
Acenaphthylene	127.8	3.3	166.4	0.4675	76.5	50 - 120				
Anthracene	126.8	3.3	166.4	1.077	75.5	50 - 123				
Benz(a)anthracene	144.9	3.3	166.4	5.426	83.8	50 - 131				
Benzidine	15.29	6.6	166.4	0	9.18	10 - 120				S
Benzo(a)pyrene	155.1	3.3	166.4	5.812	89.7	50 - 130				
Benzo(b)fluoranthene	175.4	3.3	166.4	16.4	95.6	50 - 137				
Benzo(g,h,i)perylene	192.3	3.3	166.4	14.39	107	50 - 130				
Benzo(k)fluoranthene	143.3	3.3	166.4	6.328	82.3	50 - 143				
Benzyl alcohol	128	6.6	166.4	0	76.9	40 - 143				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MS	Sample ID: HS20060313-35MS	Units: ug/Kg			Analysis Date: 15-Jun-2020 16:14					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621020	PrepDate: 09-Jun-2020	DF: 1						
Analyte	Result	SQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	129.2	6.6	166.4	0	77.6	50 - 120				
Bis(2-chloroethyl)ether	136.3	6.6	166.4	0	81.9	45 - 127				
Bis(2-chloroisopropyl)ether	159.5	6.6	166.4	0	95.8	50 - 120				
Bis(2-ethylhexyl)phthalate	147.9	6.6	166.4	3.347	86.8	21 - 148				
Butyl benzyl phthalate	135.7	6.6	166.4	0	81.5	50 - 136				
Carbazole	190.6	6.6	166.4	0	114	50 - 143				
Chrysene	121.1	3.3	166.4	7.95	68.0	50 - 130				
Dibenz(a,h)anthracene	193.3	3.3	166.4	7.273	112	50 - 130				
Dibenzofuran	119.3	3.3	166.4	0.2285	71.5	50 - 125				
Diethyl phthalate	121.9	6.6	166.4	0	73.2	50 - 125				
Dimethyl phthalate	126.8	6.6	166.4	0	76.2	50 - 125				
Di-n-butyl phthalate	134	6.6	166.4	3.554	78.4	50 - 140				
Di-n-octyl phthalate	155.4	6.6	166.4	0	93.3	50 - 140				
Fluoranthene	140.3	3.3	166.4	11.42	77.5	50 - 131				
Fluorene	117.1	3.3	166.4	0.2969	70.2	50 - 125				
Hexachlorobenzene	126.5	6.6	166.4	0	76.0	50 - 124				
Hexachlorobutadiene	111	6.6	166.4	0	66.7	50 - 125				
Hexachlorocyclopentadiene	95.68	6.6	166.4	0	57.5	45 - 135				
Hexachloroethane	113.1	6.6	166.4	0	67.9	45 - 125				
Indeno(1,2,3-cd)pyrene	196.5	3.3	166.4	8.571	113	45 - 139				
Isophorone	131.1	6.6	166.4	0	78.8	45 - 130				
Naphthalene	114	3.3	166.4	0	68.5	50 - 125				
Nitrobenzene	138.5	6.6	166.4	0	83.2	50 - 125				
N-Nitrosodimethylamine	136.2	6.6	166.4	0	81.8	20 - 140				
N-Nitrosodi-n-propylamine	123.6	6.6	166.4	0	74.3	45 - 120				
N-Nitrosodiphenylamine	132.4	6.6	166.4	0	79.5	50 - 130				
Pentachlorophenol	116.6	6.6	166.4	5.652	66.7	23 - 136				
Phenanthrene	128.8	3.3	166.4	3.087	75.5	50 - 125				
Phenol	132.9	6.6	166.4	0	79.9	45 - 130				
Pyrene	133.7	3.3	166.4	12.84	72.6	45 - 130				
Pyridine	120.4	6.6	166.4	0	72.3	15 - 120				
Surr: 2,4,6-Tribromophenol	118.8	0	166.4	0	71.4	36 - 126				
Surr: 2-Fluorobiphenyl	112.6	0	166.4	0	67.7	43 - 125				
Surr: 2-Fluorophenol	134.2	0	166.4	0	80.6	37 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MS	Sample ID: HS20060313-35MS	Units: ug/Kg			Analysis Date: 15-Jun-2020 16:14					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621020		PrepDate: 09-Jun-2020		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>	106.5	0	166.4	0	64.0	32 - 125				
<i>Surr: Nitrobenzene-d5</i>	119.1	0	166.4	0	71.5	37 - 125				
<i>Surr: Phenol-d6</i>	151.3	0	166.4	0	90.9	40 - 125				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MSD	Sample ID: HS20060313-35MSD	Units: ug/Kg			Analysis Date: 15-Jun-2020 16:33					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621021	PrepDate: 09-Jun-2020	DF: 1						
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	95.47	6.6	166.7	0	57.3	50 - 120	108.5	12.8	30	
2,4,5-Trichlorophenol	122	6.6	166.7	0	73.2	45 - 127	131	7.1	30	
2,4,6-Trichlorophenol	100.3	6.6	166.7	0	60.2	45 - 130	119.1	17.1	30	
2,4-Dichlorophenol	102.1	6.6	166.7	0	61.3	45 - 125	119.5	15.7	30	
2,4-Dimethylphenol	97.59	6.6	166.7	0	58.6	45 - 120	122	22.2	30	
2,4-Dinitrophenol	66.51	13	166.7	0	39.9	10 - 126	97.88	38.2	30	R
2,4-Dinitrotoluene	108.8	6.6	166.7	0	65.3	50 - 130	122.9	12.1	30	
2,6-Dinitrotoluene	115.1	6.6	166.7	0	69.1	50 - 125	133	14.4	30	
2-Chloronaphthalene	105	6.6	166.7	0	63.0	50 - 145	135	25	30	
2-Chlorophenol	144.5	6.6	166.7	0	86.7	45 - 120	123.4	15.7	30	
2-Methylnaphthalene	103.3	3.3	166.7	0.1708	61.9	50 - 120	117.1	12.5	30	
2-Methylphenol	115.2	6.6	166.7	0	69.1	45 - 120	127.6	10.2	30	
2-Nitroaniline	155.9	6.6	166.7	0	93.5	45 - 138	188	18.7	30	
2-Nitrophenol	104.4	6.6	166.7	0	62.6	45 - 125	120.4	14.2	30	
3&4-Methylphenol	111	6.6	166.7	0	66.6	45 - 120	122.7	10.1	30	
3,3'-Dichlorobenzidine	140.3	6.6	166.7	0	84.2	15 - 120	172.6	20.7	30	
3-Nitroaniline	117.7	6.6	166.7	0	70.6	40 - 120	123.7	5	30	
4,6-Dinitro-2-methylphenol	96.23	6.6	166.7	0	57.7	15 - 135	125.1	26.1	30	
4-Bromophenyl phenyl ether	117.4	6.6	166.7	0	70.5	50 - 125	125.6	6.73	30	
4-Chloro-3-methylphenol	114.2	6.6	166.7	0	68.5	45 - 130	127.2	10.8	30	
4-Chloroaniline	97.41	6.6	166.7	0	58.4	20 - 120	107.2	9.59	30	
4-Chlorophenyl phenyl ether	101.1	6.6	166.7	0	60.7	50 - 120	106.5	5.12	30	
4-Nitroaniline	114.3	6.6	166.7	0	68.6	50 - 127	121	5.76	30	
4-Nitrophenol	82.31	13	166.7	0	49.4	40 - 147	92.66	11.8	30	
Acenaphthene	100.4	3.3	166.7	0	60.2	50 - 120	112.5	11.4	30	
Acenaphthylene	110.3	3.3	166.7	0.4675	65.9	50 - 120	127.8	14.7	30	
Anthracene	119.9	3.3	166.7	1.077	71.3	50 - 123	126.8	5.6	30	
Benz(a)anthracene	133.3	3.3	166.7	5.426	76.7	50 - 131	144.9	8.34	30	
Benzidine	19.02	6.6	166.7	0	11.4	10 - 120	15.29	21.8	30	
Benzo(a)pyrene	139.1	3.3	166.7	5.812	80.0	50 - 130	155.1	10.9	30	
Benzo(b)fluoranthene	158.8	3.3	166.7	16.4	85.5	50 - 137	175.4	9.94	30	
Benzo(g,h,i)perylene	169.8	3.3	166.7	14.39	93.2	50 - 130	192.3	12.4	30	
Benzo(k)fluoranthene	146.1	3.3	166.7	6.328	83.9	50 - 143	143.3	1.92	30	
Benzyl alcohol	121.9	6.6	166.7	0	73.2	40 - 143	128	4.81	30	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MSD	Sample ID: HS20060313-35MSD	Units: ug/Kg			Analysis Date: 15-Jun-2020 16:33					
Client ID:	Run ID: SV-7_363243	SeqNo: 5621021	PrepDate: 09-Jun-2020	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	108.6	6.6	166.7	0	65.1	50 - 120	129.2	17.3	30	
Bis(2-chloroethyl)ether	160.4	6.6	166.7	0	96.2	45 - 127	136.3	16.3	30	
Bis(2-chloroisopropyl)ether	135.6	6.6	166.7	0	81.4	50 - 120	159.5	16.2	30	
Bis(2-ethylhexyl)phthalate	139.3	6.6	166.7	3.347	81.5	21 - 148	147.9	6.01	30	
Butyl benzyl phthalate	125.8	6.6	166.7	0	75.5	50 - 136	135.7	7.57	30	
Carbazole	171.6	6.6	166.7	0	103	50 - 143	190.6	10.5	30	
Chrysene	118.4	3.3	166.7	7.95	66.3	50 - 130	121.1	2.3	30	
Dibenz(a,h)anthracene	162.1	3.3	166.7	7.273	92.9	50 - 130	193.3	17.5	30	
Dibenzofuran	103.6	3.3	166.7	0.2285	62.0	50 - 125	119.3	14	30	
Diethyl phthalate	112.2	6.6	166.7	0	67.3	50 - 125	121.9	8.3	30	
Dimethyl phthalate	108.4	6.6	166.7	0	65.0	50 - 125	126.8	15.6	30	
Di-n-butyl phthalate	128.7	6.6	166.7	3.554	75.1	50 - 140	134	3.98	30	
Di-n-octyl phthalate	144.2	6.6	166.7	0	86.5	50 - 140	155.4	7.47	30	
Fluoranthene	134.9	3.3	166.7	11.42	74.1	50 - 131	140.3	3.94	30	
Fluorene	108.5	3.3	166.7	0.2969	64.9	50 - 125	117.1	7.64	30	
Hexachlorobenzene	112.6	6.6	166.7	0	67.6	50 - 124	126.5	11.6	30	
Hexachlorobutadiene	101	6.6	166.7	0	60.6	50 - 125	111	9.52	30	
Hexachlorocyclopentadiene	77.85	6.6	166.7	0	46.7	45 - 135	95.68	20.5	30	
Hexachloroethane	115.2	6.6	166.7	0	69.1	45 - 125	113.1	1.83	30	
Indeno(1,2,3-cd)pyrene	173.4	3.3	166.7	8.571	98.9	45 - 139	196.5	12.5	30	
Isophorone	110.2	6.6	166.7	0	66.1	45 - 130	131.1	17.3	30	
Naphthalene	99.49	3.3	166.7	0	59.7	50 - 125	114	13.6	30	
Nitrobenzene	119.2	6.6	166.7	0	71.5	50 - 125	138.5	15	30	
N-Nitrosodimethylamine	170.2	6.6	166.7	0	102	20 - 140	136.2	22.2	30	
N-Nitrosodi-n-propylamine	118.1	6.6	166.7	0	70.8	45 - 120	123.6	4.6	30	
N-Nitrosodiphenylamine	115.9	6.6	166.7	0	69.5	50 - 130	132.4	13.3	30	
Pentachlorophenol	95.2	6.6	166.7	5.652	53.7	23 - 136	116.6	20.2	30	
Phenanthrene	118.9	3.3	166.7	3.087	69.5	50 - 125	128.8	8	30	
Phenol	146.9	6.6	166.7	0	88.1	45 - 130	132.9	9.99	30	
Pyrene	132.8	3.3	166.7	12.84	72.0	45 - 130	133.7	0.663	30	
Pyridine	140.9	6.6	166.7	0	84.6	15 - 120	120.4	15.7	30	
Surr: 2,4,6-Tribromophenol	123.8	0	166.7	0	74.3	36 - 126	118.8	4.16	30	
Surr: 2-Fluorobiphenyl	94.61	0	166.7	0	56.8	43 - 125	112.6	17.4	30	
Surr: 2-Fluorophenol	150.3	0	166.7	0	90.2	37 - 125	134.2	11.3	30	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154287 (0) **Instrument:** SV-7 **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D

MSD		Sample ID: HS20060313-35MSD		Units: ug/Kg		Analysis Date: 15-Jun-2020 16:33				
Client ID:		Run ID: SV-7_363243		SeqNo: 5621021		PrepDate: 09-Jun-2020		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>	98.55	0	166.7	0	59.1	32 - 125	106.5	7.76	30	
<i>Surr: Nitrobenzene-d5</i>	105.1	0	166.7	0	63.1	37 - 125	119.1	12.4	30	
<i>Surr: Phenol-d6</i>	169.4	0	166.7	0	102	40 - 125	151.3	11.3	30	

The following samples were analyzed in this batch: HS20060314-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-154335	Units: ug/L			Analysis Date: 12-Jun-2020 11:56					
Client ID:	Run ID: SV-7_363216	SeqNo: 5618681	PrepDate: 10-Jun-2020	DF: 1						
Analyte	Result	SQL	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								

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-154335	Units: ug/L			Analysis Date: 12-Jun-2020 11:56					
Client ID:	Run ID: SV-7_363216	SeqNo: 5618681		PrepDate: 10-Jun-2020		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %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								
<i>Surr: 2,4,6-Tribromophenol</i>	<i>8.282</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>82.8</i>	<i>34 - 129</i>				
<i>Surr: 2-Fluorobiphenyl</i>	<i>5.96</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>59.6</i>	<i>40 - 125</i>				
<i>Surr: 2-Fluorophenol</i>	<i>7.113</i>	<i>0.20</i>	<i>10</i>	<i>0</i>	<i>71.1</i>	<i>20 - 120</i>				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
MBLK	Sample ID: MBLK-154335				Units: ug/L	Analysis Date: 12-Jun-2020 11:56				
Client ID:		Run ID: SV-7_363216		SeqNo: 5618681	PrepDate: 10-Jun-2020	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>	6.753	0.20	10	0	67.5	40 - 135				
<i>Surr: Nitrobenzene-d5</i>	7.231	0.20	10	0	72.3	41 - 120				
<i>Surr: Phenol-d6</i>	7.524	0.20	10	0	75.2	20 - 120				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-154335	Units: ug/L			Analysis Date: 15-Jun-2020 13:02					
Client ID:	Run ID: SV-7_363243	SeqNo: 5619107	PrepDate: 10-Jun-2020	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	3.78	0.20	5	0	75.6	45 - 120				
2,4,5-Trichlorophenol	4.26	0.20	5	0	85.2	46 - 120				
2,4,6-Trichlorophenol	4.119	0.20	5	0	82.4	42 - 120				
2,4-Dichlorophenol	4.087	0.20	5	0	81.7	49 - 120				
2,4-Dimethylphenol	4.337	0.20	5	0	86.7	35 - 120				
2,4-Dinitrophenol	4.325	1.0	5	0	86.5	15 - 120				
2,4-Dinitrotoluene	4.419	0.20	5	0	88.4	50 - 122				
2,6-Dinitrotoluene	4.205	0.20	5	0	84.1	50 - 120				
2-Chloronaphthalene	4.356	0.20	5	0	87.1	50 - 120				
2-Chlorophenol	3.976	0.20	5	0	79.5	40 - 120				
2-Methylnaphthalene	3.4	0.10	5	0	68.0	50 - 120				
2-Methylphenol	4.374	0.20	5	0	87.5	45 - 120				
2-Nitroaniline	5.544	0.20	5	0	111	28 - 139				
2-Nitrophenol	4.291	0.20	5	0	85.8	40 - 120				
3&4-Methylphenol	4.357	0.20	5	0	87.1	35 - 120				
3,3'-Dichlorobenzidine	5.638	0.20	5	0	113	15 - 120				
3-Nitroaniline	4.258	0.20	5	0	85.2	30 - 120				
4,6-Dinitro-2-methylphenol	4.712	0.20	5	0	94.2	25 - 121				
4-Bromophenyl phenyl ether	4.01	0.20	5	0	80.2	45 - 120				
4-Chloro-3-methylphenol	3.9	0.20	5	0	78.0	47 - 120				
4-Chloroaniline	4.08	0.20	5	0	81.6	20 - 120				
4-Chlorophenyl phenyl ether	3.96	0.20	5	0	79.2	50 - 120				
4-Nitroaniline	4.383	0.20	5	0	87.7	30 - 133				
4-Nitrophenol	4.377	1.0	5	0	87.5	30 - 130				
Acenaphthene	3.833	0.10	5	0	76.7	45 - 120				
Acenaphthylene	4.225	0.10	5	0	84.5	47 - 120				
Anthracene	4.192	0.10	5	0	83.8	45 - 120				
Benz(a)anthracene	4.87	0.10	5	0	97.4	40 - 120				
Benzidine	0.5394	0.20	5	0	10.8	10 - 120				
Benzo(a)pyrene	5.063	0.10	5	0	101	45 - 120				
Benzo(b)fluoranthene	5.551	0.10	5	0	111	50 - 120				
Benzo(g,h,i)perylene	5.953	0.10	5	0	119	42 - 127				
Benzo(k)fluoranthene	5.612	0.10	5	0	112	45 - 127				
Benzyl alcohol	4.19	0.20	5	0	83.8	35 - 122				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-154335	Units: ug/L			Analysis Date: 15-Jun-2020 13:02					
Client ID:	Run ID: SV-7_363243	SeqNo: 5619107	PrepDate: 10-Jun-2020	DF: 1						
Analyte	Result	SQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	4.526	0.20	5	0	90.5	45 - 120				
Bis(2-chloroethyl)ether	4.143	0.20	5	0	82.9	37 - 121				
Bis(2-chloroisopropyl)ether	5.908	0.20	5	0	118	40 - 120				
Bis(2-ethylhexyl)phthalate	5.075	0.20	5	0	102	40 - 139				
Butyl benzyl phthalate	4.839	0.20	5	0	96.8	47 - 123				
Carbazole	5.69	0.20	5	0	114	42 - 128				
Chrysene	4.453	0.10	5	0	89.1	43 - 120				
Dibenz(a,h)anthracene	6.235	0.10	5	0	125	45 - 125				
Dibenzofuran	4.031	0.10	5	0	80.6	50 - 120				
Diethyl phthalate	4.301	0.20	5	0	86.0	41 - 120				
Dimethyl phthalate	4.157	0.20	5	0	83.1	40 - 122				
Di-n-butyl phthalate	4.725	0.20	5	0	94.5	45 - 123				
Di-n-octyl phthalate	5.722	0.20	5	0	114	45 - 129				
Fluoranthene	4.463	0.10	5	0	89.3	45 - 125				
Fluorene	4.149	0.10	5	0	83.0	49 - 120				
Hexachlorobenzene	4.165	0.20	5	0	83.3	48 - 120				
Hexachlorobutadiene	3.54	0.20	5	0	70.8	40 - 120				
Hexachlorocyclopentadiene	3.48	0.20	5	0	69.6	34 - 136				
Hexachloroethane	4.003	0.20	5	0	80.1	40 - 120				
Indeno(1,2,3-cd)pyrene	6.065	0.10	5	0	121	41 - 128				
Isophorone	4.827	0.20	5	0	96.5	40 - 121				
Naphthalene	3.904	0.10	5	0	78.1	45 - 120				
Nitrobenzene	4.98	0.20	5	0	99.6	44 - 120				
N-Nitrosodimethylamine	4.862	0.20	5	0	97.2	30 - 121				
N-Nitrosodi-n-propylamine	4.539	0.20	5	0	90.8	40 - 120				
N-Nitrosodiphenylamine	4.191	0.20	5	0	83.8	40 - 125				
Pentachlorophenol	3.462	0.20	5	0	69.2	19 - 121				
Phenanthrene	4.193	0.10	5	0	83.9	45 - 121				
Phenol	4.377	0.20	5	0	87.5	20 - 124				
Pyrene	4.397	0.10	5	0	87.9	40 - 130				
Pyridine	4.34	1.0	5	0	86.8	15 - 120				
Surr: 2,4,6-Tribromophenol	4.475	0.20	5	0	89.5	34 - 129				
Surr: 2-Fluorobiphenyl	3.693	0.20	5	0	73.9	40 - 125				
Surr: 2-Fluorophenol	4.584	0.20	5	0	91.7	20 - 120				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCS	Sample ID: LCS-154335	Units: ug/L			Analysis Date: 15-Jun-2020 13:02					
Client ID:	Run ID: SV-7_363243	SeqNo: 5619107		PrepDate: 10-Jun-2020		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>	3.956	0.20	5	0	79.1	40 - 135				
<i>Surr: Nitrobenzene-d5</i>	4.39	0.20	5	0	87.8	41 - 120				
<i>Surr: Phenol-d6</i>	4.978	0.20	5	0	99.6	20 - 120				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCSD		Sample ID: LCSD-154335		Units: ug/L		Analysis Date: 15-Jun-2020 13:21				
Client ID:		Run ID: SV-7_363243		SeqNo: 5619108		PrepDate: 10-Jun-2020		DF: 1		
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	3.721	0.20	5	0	74.4	45 - 120	3.78	1.57	20	
2,4,5-Trichlorophenol	4.408	0.20	5	0	88.2	46 - 120	4.26	3.42	20	
2,4,6-Trichlorophenol	4.212	0.20	5	0	84.2	42 - 120	4.119	2.23	20	
2,4-Dichlorophenol	3.911	0.20	5	0	78.2	49 - 120	4.087	4.42	20	
2,4-Dimethylphenol	4.041	0.20	5	0	80.8	35 - 120	4.337	7.06	20	
2,4-Dinitrophenol	5.019	1.0	5	0	100	15 - 120	4.325	14.8	50	
2,4-Dinitrotoluene	4.521	0.20	5	0	90.4	50 - 122	4.419	2.29	20	
2,6-Dinitrotoluene	4.281	0.20	5	0	85.6	50 - 120	4.205	1.78	20	
2-Chloronaphthalene	5.159	0.20	5	0	103	50 - 120	4.356	16.9	20	
2-Chlorophenol	4.175	0.20	5	0	83.5	40 - 120	3.976	4.88	20	
2-Methylnaphthalene	3.072	0.10	5	0	61.4	50 - 120	3.4	10.2	20	
2-Methylphenol	4.141	0.20	5	0	82.8	45 - 120	4.374	5.49	20	
2-Nitroaniline	5.55	0.20	5	0	111	28 - 139	5.544	0.103	20	
2-Nitrophenol	4.17	0.20	5	0	83.4	40 - 120	4.291	2.85	20	
3&4-Methylphenol	4.108	0.20	5	0	82.2	35 - 120	4.357	5.89	20	
3,3'-Dichlorobenzidine	5.697	0.20	5	0	114	15 - 120	5.638	1.05	20	
3-Nitroaniline	4.472	0.20	5	0	89.4	30 - 120	4.258	4.9	20	
4,6-Dinitro-2-methylphenol	4.996	0.20	5	0	99.9	25 - 121	4.712	5.85	30	
4-Bromophenyl phenyl ether	3.971	0.20	5	0	79.4	45 - 120	4.01	0.975	20	
4-Chloro-3-methylphenol	3.412	0.20	5	0	68.2	47 - 120	3.9	13.3	20	
4-Chloroaniline	4.041	0.20	5	0	80.8	20 - 120	4.08	0.962	20	
4-Chlorophenyl phenyl ether	3.784	0.20	5	0	75.7	50 - 120	3.96	4.56	20	
4-Nitroaniline	4.44	0.20	5	0	88.8	30 - 133	4.383	1.29	20	
4-Nitrophenol	4.464	1.0	5	0	89.3	30 - 130	4.377	1.96	20	
Acenaphthene	3.854	0.10	5	0	77.1	45 - 120	3.833	0.557	20	
Acenaphthylene	4.279	0.10	5	0	85.6	47 - 120	4.225	1.26	20	
Anthracene	4.142	0.10	5	0	82.8	45 - 120	4.192	1.2	20	
Benz(a)anthracene	4.799	0.10	5	0	96.0	40 - 120	4.87	1.46	20	
Benzidine	1.093	0.20	5	0	21.9	10 - 120	0.5394	67.8	30	R
Benzo(a)pyrene	5.023	0.10	5	0	100	45 - 120	5.063	0.788	20	
Benzo(b)fluoranthene	5.512	0.10	5	0	110	50 - 120	5.551	0.702	20	
Benzo(g,h,i)perylene	5.952	0.10	5	0	119	42 - 127	5.953	0.0222	20	
Benzo(k)fluoranthene	4.76	0.10	5	0	95.2	45 - 127	5.612	16.4	20	
Benzyl alcohol	3.935	0.20	5	0	78.7	35 - 122	4.19	6.27	20	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCSD		Sample ID: LCSD-154335		Units: ug/L		Analysis Date: 15-Jun-2020 13:21				
Client ID:		Run ID: SV-7_363243		SeqNo: 5619108		PrepDate: 10-Jun-2020		DF: 1		
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Bis(2-chloroethoxy)methane	4.33	0.20	5	0	86.6	45 - 120	4.526	4.41	20	
Bis(2-chloroethyl)ether	4.363	0.20	5	0	87.3	37 - 121	4.143	5.18	20	
Bis(2-chloroisopropyl)ether	5.318	0.20	5	0	106	40 - 120	5.908	10.5	20	
Bis(2-ethylhexyl)phthalate	5.227	0.20	5	0	105	40 - 139	5.075	2.96	20	
Butyl benzyl phthalate	4.918	0.20	5	0	98.4	47 - 123	4.839	1.62	20	
Carbazole	5.784	0.20	5	0	116	42 - 128	5.69	1.63	20	
Chrysene	4.235	0.10	5	0	84.7	43 - 120	4.453	5.02	20	
Dibenz(a,h)anthracene	5.895	0.10	5	0	118	45 - 125	6.235	5.61	20	
Dibenzofuran	3.943	0.10	5	0	78.9	50 - 120	4.031	2.21	20	
Diethyl phthalate	4.276	0.20	5	0	85.5	41 - 120	4.301	0.57	20	
Dimethyl phthalate	4.225	0.20	5	0	84.5	40 - 122	4.157	1.61	20	
Di-n-butyl phthalate	4.732	0.20	5	0	94.6	45 - 123	4.725	0.141	20	
Di-n-octyl phthalate	5.401	0.20	5	0	108	45 - 129	5.722	5.77	20	
Fluoranthene	4.371	0.10	5	0	87.4	45 - 125	4.463	2.08	20	
Fluorene	4.153	0.10	5	0	83.1	49 - 120	4.149	0.102	20	
Hexachlorobenzene	4.076	0.20	5	0	81.5	48 - 120	4.165	2.16	20	
Hexachlorobutadiene	3.319	0.20	5	0	66.4	40 - 120	3.54	6.45	20	
Hexachlorocyclopentadiene	3.585	0.20	5	0	71.7	34 - 136	3.48	3	20	
Hexachloroethane	3.729	0.20	5	0	74.6	40 - 120	4.003	7.09	20	
Indeno(1,2,3-cd)pyrene	5.83	0.10	5	0	117	41 - 128	6.065	3.95	20	
Isophorone	4.72	0.20	5	0	94.4	40 - 121	4.827	2.24	20	
Naphthalene	3.82	0.10	5	0	76.4	45 - 120	3.904	2.17	20	
Nitrobenzene	4.886	0.20	5	0	97.7	44 - 120	4.98	1.91	20	
N-Nitrosodimethylamine	4.81	0.20	5	0	96.2	30 - 121	4.862	1.06	20	
N-Nitrosodi-n-propylamine	4.332	0.20	5	0	86.6	40 - 120	4.539	4.66	20	
N-Nitrosodiphenylamine	4.162	0.20	5	0	83.2	40 - 125	4.191	0.698	20	
Pentachlorophenol	3.642	0.20	5	0	72.8	19 - 121	3.462	5.08	20	
Phenanthrene	4.131	0.10	5	0	82.6	45 - 121	4.193	1.5	20	
Phenol	4.402	0.20	5	0	88.0	20 - 124	4.377	0.576	20	
Pyrene	4.292	0.10	5	0	85.8	40 - 130	4.397	2.42	20	
Pyridine	4.399	1.0	5	0	88.0	15 - 120	4.34	1.35	20	
Surr: 2,4,6-Tribromophenol	4.592	0.20	5	0	91.8	34 - 129	4.475	2.57	20	
Surr: 2-Fluorobiphenyl	3.756	0.20	5	0	75.1	40 - 125	3.693	1.67	20	
Surr: 2-Fluorophenol	4.19	0.20	5	0	83.8	20 - 120	4.584	8.98	20	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: 154335 (0)		Instrument: SV-7		Method: LOW-LEVEL SEMIVOLATILES BY 8270D						
LCSD	Sample ID: LCSD-154335	Units: ug/L			Analysis Date: 15-Jun-2020 13:21					
Client ID:	Run ID: SV-7_363243	SeqNo: 5619108		PrepDate: 10-Jun-2020		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>	3.94	0.20	5	0	78.8	40 - 135	3.956	0.396	20	
<i>Surr: Nitrobenzene-d5</i>	4.326	0.20	5	0	86.5	41 - 120	4.39	1.46	20	
<i>Surr: Phenol-d6</i>	5.082	0.20	5	0	102	20 - 120	4.978	2.08	20	

The following samples were analyzed in this batch: HS20060314-02

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8		Method: VOLATILES BY SW8260C						
MBLK	Sample ID: VBLKS1-060920	Units: ug/Kg			Analysis Date: 09-Jun-2020 12:22					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611444		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	5.0								
1,1,2,2-Tetrachloroethane	U	5.0								
1,1,2-Trichloroethane	U	5.0								
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichlorobenzene	U	5.0								
1,2-Dichloroethane	U	5.0								
1,2-Dichloropropane	U	5.0								
1,3-Dichlorobenzene	U	5.0								
1,4-Dichlorobenzene	U	5.0								
2-Butanone	U	10								
2-Hexanone	U	10								
4-Methyl-2-pentanone	U	10								
Acetone	U	20								
Benzene	U	5.0								
Bromochloromethane	U	5.0								
Bromodichloromethane	U	5.0								
Bromoform	U	5.0								
Bromomethane	U	10								
Carbon disulfide	U	10								
Carbon tetrachloride	U	5.0								
Chlorobenzene	U	5.0								
Chloroethane	U	10								
Chloroform	U	5.0								
Chloromethane	U	10								
cis-1,2-Dichloroethene	U	5.0								
cis-1,3-Dichloropropene	U	5.0								
Dibromochloromethane	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	10								
Methylene chloride	U	10								
o-Xylene	U	5.0								
Styrene	U	5.0								
Tetrachloroethene	U	5.0								

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8		Method: VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKS1-060920	Units: ug/Kg			Analysis Date: 09-Jun-2020 12:22				
Client ID:	Run ID: VOA8_362887	SeqNo: 5611444		PrepDate:		DF: 1			
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Toluene	U	5.0							
trans-1,2-Dichloroethene	U	5.0							
trans-1,3-Dichloropropene	U	5.0							
Trichloroethene	U	5.0							
Vinyl acetate	U	10							
Vinyl chloride	U	2.0							
Xylenes, Total	U	5.0							
1,2-Dichloroethene, Total	U	5.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>46.1</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>92.2</i>	<i>76 - 125</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.92</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.8</i>	<i>80 - 120</i>			
<i>Surr: Dibromofluoromethane</i>	<i>48.68</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>97.4</i>	<i>80 - 119</i>			
<i>Surr: Toluene-d8</i>	<i>50.25</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>81 - 118</i>			

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8			Method: VOLATILES BY SW8260C					
LCS	Sample ID: VLCSS1-060920	Units: ug/Kg			Analysis Date: 09-Jun-2020 11:36					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611443		PrepDate:		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.11	5.0	50	0	106	72 - 130				
1,1,2,2-Tetrachloroethane	47.36	5.0	50	0	94.7	71 - 124				
1,1,2-Trichloroethane	47.36	5.0	50	0	94.7	78 - 117				
1,1-Dichloroethane	51.6	5.0	50	0	103	76 - 128				
1,1-Dichloroethene	50.85	5.0	50	0	102	72 - 130				
1,2-Dichlorobenzene	47.91	5.0	50	0	95.8	79 - 121				
1,2-Dichloroethane	47.87	5.0	50	0	95.7	77 - 120				
1,2-Dichloropropane	46.32	5.0	50	0	92.6	77 - 121				
1,3-Dichlorobenzene	48.44	5.0	50	0	96.9	78 - 121				
1,4-Dichlorobenzene	47.93	5.0	50	0	95.9	78 - 120				
2-Butanone	81.58	10	100	0	81.6	70 - 128				
2-Hexanone	93.52	10	100	0	93.5	72 - 127				
4-Methyl-2-pentanone	91.38	10	100	0	91.4	70 - 128				
Acetone	80.62	20	100	0	80.6	70 - 130				
Benzene	48.19	5.0	50	0	96.4	75 - 124				
Bromochloromethane	52.13	5.0	50	0	104	74 - 124				
Bromodichloromethane	51.1	5.0	50	0	102	78 - 122				
Bromoform	50.56	5.0	50	0	101	74 - 120				
Bromomethane	50.29	10	50	0	101	70 - 130				
Carbon disulfide	107.8	10	100	0	108	70 - 122				
Carbon tetrachloride	46.38	5.0	50	0	92.8	72 - 128				
Chlorobenzene	47.67	5.0	50	0	95.3	78 - 122				
Chloroethane	48.94	10	50	0	97.9	70 - 130				
Chloroform	54.91	5.0	50	0	110	73 - 127				
Chloromethane	49.86	10	50	0	99.7	70 - 130				
cis-1,2-Dichloroethene	50.87	5.0	50	0	102	77 - 125				
cis-1,3-Dichloropropene	51.21	5.0	50	0	102	78 - 122				
Dibromochloromethane	51.36	5.0	50	0	103	78 - 120				
Ethylbenzene	47.92	5.0	50	0	95.8	70 - 123				
m,p-Xylene	97.47	10	100	0	97.5	77 - 125				
Methylene chloride	53.08	10	50	0	106	71 - 125				
o-Xylene	49.52	5.0	50	0	99.0	78 - 122				
Styrene	50.31	5.0	50	0	101	80 - 123				
Tetrachloroethene	47.64	5.0	50	0	95.3	70 - 130				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8		Method: VOLATILES BY SW8260C						
LCS	Sample ID: VLCSS1-060920	Units: ug/Kg			Analysis Date: 09-Jun-2020 11:36					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611443		PrepDate:		DF: 1				
Analyte	Result	MLL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Toluene	47.57	5.0	50	0	95.1	76 - 122				
trans-1,2-Dichloroethene	50.48	5.0	50	0	101	75 - 128				
trans-1,3-Dichloropropene	50.75	5.0	50	0	101	75 - 123				
Trichloroethene	48.8	5.0	50	0	97.6	78 - 125				
Vinyl acetate	106.8	10	100	0	107	70 - 130				
Vinyl chloride	52.26	2.0	50	0	105	70 - 130				
Xylenes, Total	147	5.0	150	0	98.0	77 - 128				
1,2-Dichloroethene, Total	101.3	5.0	100	0	101	75 - 128				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>54.47</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>109</i>	<i>76 - 125</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>50</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100.0</i>	<i>80 - 120</i>				
<i>Surr: Dibromofluoromethane</i>	<i>55.08</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>80 - 119</i>				
<i>Surr: Toluene-d8</i>	<i>49.56</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.1</i>	<i>81 - 118</i>				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8		Method: VOLATILES BY SW8260C						
MS	Sample ID: HS20060283-01MS	Units: ug/Kg			Analysis Date: 09-Jun-2020 13:08					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611625	PrepDate:	DF: 1						
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	55.53	5.0	50.5	0	110	70 - 130				
1,1,2,2-Tetrachloroethane	48.78	5.0	50.5	0	96.6	70 - 130				
1,1,2-Trichloroethane	52.11	5.0	50.5	0	103	70 - 130				
1,1-Dichloroethane	56.29	5.0	50.5	0	111	70 - 130				
1,1-Dichloroethene	54.87	5.0	50.5	0	109	70 - 130				
1,2-Dichlorobenzene	44.68	5.0	50.5	0	88.5	70 - 130				
1,2-Dichloroethane	52.88	5.0	50.5	0	105	70 - 130				
1,2-Dichloropropane	53.44	5.0	50.5	0	106	70 - 130				
1,3-Dichlorobenzene	46.2	5.0	50.5	0	91.5	70 - 130				
1,4-Dichlorobenzene	44.97	5.0	50.5	0	89.1	70 - 130				
2-Butanone	76.15	10	101	0	75.4	70 - 130				
2-Hexanone	80.04	10	101	0	79.2	70 - 130				
4-Methyl-2-pentanone	283.8	10	101	0	281	70 - 128				S
Acetone	285.6	20	101	0	283	70 - 130				S
Benzene	54.83	5.0	50.5	0	109	70 - 130				
Bromochloromethane	55.08	5.0	50.5	0	109	70 - 130				
Bromodichloromethane	55.5	5.0	50.5	0	110	70 - 130				
Bromoform	51.34	5.0	50.5	0	102	70 - 130				
Bromomethane	42.37	10	50.5	0	83.9	70 - 130				
Carbon disulfide	106.1	10	101	0	105	70 - 130				
Carbon tetrachloride	53	5.0	50.5	0	105	70 - 130				
Chlorobenzene	49.61	5.0	50.5	0	98.2	70 - 130				
Chloroethane	52.78	10	50.5	0	105	70 - 130				
Chloroform	56.67	5.0	50.5	0	112	70 - 130				
Chloromethane	54.77	10	50.5	0	108	70 - 130				
cis-1,2-Dichloroethene	55.8	5.0	50.5	0	110	70 - 130				
cis-1,3-Dichloropropene	49.21	5.0	50.5	0	97.4	70 - 130				
Dibromochloromethane	58.3	5.0	50.5	0	115	70 - 130				
Ethylbenzene	50.16	5.0	50.5	0	99.3	70 - 130				
m,p-Xylene	103.1	10	101	0	102	70 - 130				
Methylene chloride	50.66	10	50.5	0	100	70 - 130				
o-Xylene	51.49	5.0	50.5	0	102	70 - 130				
Styrene	50.15	5.0	50.5	0	99.3	70 - 130				
Tetrachloroethene	49.79	5.0	50.5	0	98.6	70 - 130				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8		Method: VOLATILES BY SW8260C						
MS	Sample ID: HS20060283-01MS	Units: ug/Kg			Analysis Date: 09-Jun-2020 13:08					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611625		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Toluene	52.57	5.0	50.5	0	104	70 - 130				
trans-1,2-Dichloroethene	53.91	5.0	50.5	0	107	70 - 130				
trans-1,3-Dichloropropene	50.1	5.0	50.5	0	99.2	70 - 130				
Trichloroethene	53.94	5.0	50.5	0	107	70 - 130				
Vinyl acetate	42.92	10	101	0	42.5	70 - 130				S
Vinyl chloride	57.17	2.0	50.5	0	113	70 - 130				
Xylenes, Total	154.6	5.0	151.5	0	102	70 - 130				
1,2-Dichloroethene, Total	109.7	5.0	101	0	109	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>48.79</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>96.6</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.38</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>99.8</i>	<i>70 - 130</i>				
<i>Surr: Dibromofluoromethane</i>	<i>50.88</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>101</i>	<i>70 - 130</i>				
<i>Surr: Toluene-d8</i>	<i>49.88</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>98.8</i>	<i>70 - 130</i>				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)										
Instrument: VOA8				Method: VOLATILES BY SW8260C						
MSD	Sample ID: HS20060283-01MSD	Units: ug/Kg			Analysis Date: 09-Jun-2020 13:31					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611626		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.64	5.0	50.5	0	106	70 - 130	55.53	3.47	30	
1,1,2,2-Tetrachloroethane	44.97	5.0	50.5	0	89.0	70 - 130	48.78	8.13	30	
1,1,2-Trichloroethane	49.88	5.0	50.5	0	98.8	70 - 130	52.11	4.37	30	
1,1-Dichloroethane	54.5	5.0	50.5	0	108	70 - 130	56.29	3.23	30	
1,1-Dichloroethene	51.61	5.0	50.5	0	102	70 - 130	54.87	6.13	30	
1,2-Dichlorobenzene	39.82	5.0	50.5	0	78.9	70 - 130	44.68	11.5	30	
1,2-Dichloroethane	50.52	5.0	50.5	0	100	70 - 130	52.88	4.56	30	
1,2-Dichloropropane	48.82	5.0	50.5	0	96.7	70 - 130	53.44	9.02	30	
1,3-Dichlorobenzene	40.15	5.0	50.5	0	79.5	70 - 130	46.2	14	30	
1,4-Dichlorobenzene	39.34	5.0	50.5	0	77.9	70 - 130	44.97	13.4	30	
2-Butanone	68.75	10	101	0	68.1	70 - 130	76.15	10.2	30	S
2-Hexanone	76.48	10	101	0	75.7	70 - 130	80.04	4.54	30	
4-Methyl-2-pentanone	337.1	10	101	0	334	70 - 128	283.8	17.2	30	S
Acetone	367	20	101	0	363	70 - 130	285.6	24.9	30	S
Benzene	52.34	5.0	50.5	0	104	70 - 130	54.83	4.65	30	
Bromochloromethane	53.28	5.0	50.5	0	106	70 - 130	55.08	3.32	30	
Bromodichloromethane	51.36	5.0	50.5	0	102	70 - 130	55.5	7.74	30	
Bromoform	46.52	5.0	50.5	0	92.1	70 - 130	51.34	9.84	30	
Bromomethane	42.39	10	50.5	0	83.9	70 - 130	42.37	0.0531	30	
Carbon disulfide	96.72	10	101	0	95.8	70 - 130	106.1	9.24	30	
Carbon tetrachloride	49.38	5.0	50.5	0	97.8	70 - 130	53	7.07	30	
Chlorobenzene	45.75	5.0	50.5	0	90.6	70 - 130	49.61	8.09	30	
Chloroethane	51.8	10	50.5	0	103	70 - 130	52.78	1.87	30	
Chloroform	54.24	5.0	50.5	0	107	70 - 130	56.67	4.38	30	
Chloromethane	53.2	10	50.5	0	105	70 - 130	54.77	2.91	30	
cis-1,2-Dichloroethene	53.15	5.0	50.5	0	105	70 - 130	55.8	4.86	30	
cis-1,3-Dichloropropene	43.22	5.0	50.5	0	85.6	70 - 130	49.21	12.9	30	
Dibromochloromethane	53.8	5.0	50.5	0	107	70 - 130	58.3	8.03	30	
Ethylbenzene	44.69	5.0	50.5	0	88.5	70 - 130	50.16	11.5	30	
m,p-Xylene	93.91	10	101	0	93.0	70 - 130	103.1	9.38	30	
Methylene chloride	49.87	10	50.5	0	98.8	70 - 130	50.66	1.57	30	
o-Xylene	47.17	5.0	50.5	0	93.4	70 - 130	51.49	8.76	30	
Styrene	45.08	5.0	50.5	0	89.3	70 - 130	50.15	10.6	30	
Tetrachloroethene	46.63	5.0	50.5	0	92.3	70 - 130	49.79	6.56	30	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362887 (0)		Instrument: VOA8		Method: VOLATILES BY SW8260C						
MSD	Sample ID: HS20060283-01MSD	Units: ug/Kg			Analysis Date: 09-Jun-2020 13:31					
Client ID:	Run ID: VOA8_362887	SeqNo: 5611626		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Toluene	48.37	5.0	50.5	0	95.8	70 - 130	52.57	8.32	30	
trans-1,2-Dichloroethene	52.67	5.0	50.5	0	104	70 - 130	53.91	2.33	30	
trans-1,3-Dichloropropene	46.21	5.0	50.5	0	91.5	70 - 130	50.1	8.09	30	
Trichloroethene	49.47	5.0	50.5	0	98.0	70 - 130	53.94	8.64	30	
Vinyl acetate	25.66	10	101	0	25.4	70 - 130	42.92	50.3	30	SR
Vinyl chloride	56.24	2.0	50.5	0	111	70 - 130	57.17	1.64	30	
Xylenes, Total	141.1	5.0	151.5	0	93.1	70 - 130	154.6	9.17	30	
1,2-Dichloroethene, Total	105.8	5.0	101	0	105	70 - 130	109.7	3.61	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>50.13</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>99.3</i>	<i>70 - 126</i>	<i>48.79</i>	<i>2.7</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.39</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>99.8</i>	<i>70 - 130</i>	<i>50.38</i>	<i>0.0109</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>51.16</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>101</i>	<i>70 - 130</i>	<i>50.88</i>	<i>0.553</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>49.79</i>	<i>0</i>	<i>50.5</i>	<i>0</i>	<i>98.6</i>	<i>70 - 130</i>	<i>49.88</i>	<i>0.192</i>	<i>30</i>	

The following samples were analyzed in this batch: HS20060314-01

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C						
MBLK	Sample ID: VBLKW-200613	Units: ug/L			Analysis Date: 13-Jun-2020 15:06					
Client ID:	Run ID: VOA4_363212	SeqNo: 5618615	PrepDate:	DF: 1						
Analyte	Result	SQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	1.0								
1,3-Dichlorobenzene	U	1.0								
1,4-Dichlorobenzene	U	1.0								
2-Butanone	U	2.0								
2-Hexanone	U	2.0								
4-Methyl-2-pentanone	U	2.0								
Acetone	U	2.0								
Benzene	U	1.0								
Bromochloromethane	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.0								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Dibromochloromethane	U	1.0								
Ethylbenzene	U	1.0								
m,p-Xylene	U	2.0								
Methylene chloride	U	2.0								
o-Xylene	U	1.0								
Styrene	U	1.0								
Tetrachloroethene	U	1.0								

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-200613	Units: ug/L			Analysis Date: 13-Jun-2020 15:06				
Client ID:	Run ID: VOA4_363212	SeqNo: 5618615		PrepDate:		DF: 1			
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Toluene	U	1.0							
trans-1,2-Dichloroethene	U	1.0							
trans-1,3-Dichloropropene	U	1.0							
Trichloroethene	U	1.0							
Vinyl acetate	U	1.0							
Vinyl chloride	U	1.0							
Xylenes, Total	U	1.0							
1,2-Dichloroethene, Total	U	1.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>52.11</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.76</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>82 - 115</i>			
<i>Surr: Dibromofluoromethane</i>	<i>51.92</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>49.45</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>98.9</i>	<i>81 - 120</i>			

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C						
LCS	Sample ID: VLCSW-200613	Units: ug/L			Analysis Date: 13-Jun-2020 14:17					
Client ID:	Run ID: VOA4_363212	SeqNo: 5618614		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,1,1-Trichloroethane	19.76	1.0	20	0	98.8	70 - 130				
1,1,2,2-Tetrachloroethane	18.31	1.0	20	0	91.5	70 - 120				
1,1,2-Trichloroethane	18.71	1.0	20	0	93.6	77 - 113				
1,1-Dichloroethane	18.96	1.0	20	0	94.8	71 - 122				
1,1-Dichloroethene	19.07	1.0	20	0	95.4	70 - 130				
1,2-Dichlorobenzene	19.61	1.0	20	0	98.0	77 - 113				
1,2-Dichloroethane	20.8	1.0	20	0	104	70 - 124				
1,2-Dichloropropane	19.26	1.0	20	0	96.3	72 - 119				
1,3-Dichlorobenzene	19.78	1.0	20	0	98.9	78 - 118				
1,4-Dichlorobenzene	19.3	1.0	20	0	96.5	79 - 113				
2-Butanone	39.73	2.0	40	0	99.3	70 - 130				
2-Hexanone	41.14	2.0	40	0	103	70 - 130				
4-Methyl-2-pentanone	41.17	2.0	40	0	103	70 - 130				
Acetone	40.62	2.0	40	0	102	70 - 130				
Benzene	18.49	1.0	20	0	92.4	74 - 120				
Bromochloromethane	19.45	1.0	20	0	97.2	76 - 124				
Bromodichloromethane	18.94	1.0	20	0	94.7	74 - 122				
Bromoform	19.28	1.0	20	0	96.4	73 - 128				
Bromomethane	37.68	1.0	20	0	188	70 - 130			S	
Carbon disulfide	39.48	2.0	40	0	98.7	70 - 130				
Carbon tetrachloride	20.06	1.0	20	0	100	71 - 125				
Chlorobenzene	18.76	1.0	20	0	93.8	76 - 113				
Chloroethane	20.96	1.0	20	0	105	70 - 130				
Chloroform	18.88	1.0	20	0	94.4	71 - 121				
Chloromethane	15.26	1.0	20	0	76.3	70 - 129				
cis-1,2-Dichloroethene	19	1.0	20	0	95.0	75 - 122				
cis-1,3-Dichloropropene	19.21	1.0	20	0	96.1	73 - 127				
Dibromochloromethane	19.11	1.0	20	0	95.5	77 - 122				
Ethylbenzene	19.37	1.0	20	0	96.8	77 - 117				
m,p-Xylene	39.39	2.0	40	0	98.5	77 - 122				
Methylene chloride	19.79	2.0	20	0	98.9	70 - 127				
o-Xylene	19.32	1.0	20	0	96.6	75 - 119				
Styrene	19.37	1.0	20	0	96.8	72 - 126				
Tetrachloroethene	20.25	1.0	20	0	101	76 - 119				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0) **Instrument:** VOA4 **Method:** LOW LEVEL VOLATILES BY SW8260C

LCS		Sample ID: VLCSW-200613			Units: ug/L		Analysis Date: 13-Jun-2020 14:17			
Client ID:		Run ID: VOA4_363212			SeqNo: 5618614		PrepDate:		DF: 1	
Analyte	Result	MLL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Toluene	18.57	1.0	20	0	92.9	77 - 118				
trans-1,2-Dichloroethene	18.88	1.0	20	0	94.4	72 - 127				
trans-1,3-Dichloropropene	19.74	1.0	20	0	98.7	77 - 119				
Trichloroethene	20.2	1.0	20	0	101	77 - 121				
Vinyl acetate	39.98	1.0	40	0	100.0	70 - 130				
Vinyl chloride	18.9	1.0	20	0	94.5	70 - 130				
Xylenes, Total	58.72	1.0	60	0	97.9	75 - 122				
1,2-Dichloroethene, Total	37.87	1.0	40	0	94.7	72 - 127				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>51.04</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>70 - 130</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.89</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.8</i>	<i>82 - 115</i>				
<i>Surr: Dibromofluoromethane</i>	<i>51.59</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>73 - 126</i>				
<i>Surr: Toluene-d8</i>	<i>49.8</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.6</i>	<i>81 - 120</i>				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C						
MS	Sample ID: HS20060287-01MS	Units: ug/L			Analysis Date: 13-Jun-2020 16:22					
Client ID:	Run ID: VOA4_363212	SeqNo: 5618618	PrepDate:	DF: 1						
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.11	1.0	20	0	111	70 - 130				
1,1,2,2-Tetrachloroethane	20.04	1.0	20	0	100	70 - 123				
1,1,2-Trichloroethane	19.13	1.0	20	0	95.7	70 - 117				
1,1-Dichloroethane	20.36	1.0	20	0	102	70 - 127				
1,1-Dichloroethene	20.71	1.0	20	0	104	70 - 130				
1,2-Dichlorobenzene	20.43	1.0	20	0	102	70 - 115				
1,2-Dichloroethane	21.74	1.0	20	0	109	70 - 127				
1,2-Dichloropropane	20.22	1.0	20	0	101	70 - 122				
1,3-Dichlorobenzene	20.89	1.0	20	0	104	70 - 119				
1,4-Dichlorobenzene	20.25	1.0	20	0	101	70 - 114				
2-Butanone	42.11	2.0	40	0	105	70 - 130				
2-Hexanone	48.97	2.0	40	0	122	70 - 130				
4-Methyl-2-pentanone	47.3	2.0	40	0	118	70 - 130				
Acetone	43.19	2.0	40	0	108	70 - 130				
Benzene	20.03	1.0	20	0.3733	98.3	70 - 127				
Bromochloromethane	20.42	1.0	20	0	102	70 - 127				
Bromodichloromethane	20.17	1.0	20	0	101	70 - 124				
Bromoform	20.57	1.0	20	0	103	70 - 129				
Bromomethane	46.81	1.0	20	0	234	70 - 130				S
Carbon disulfide	42.35	2.0	40	0	106	70 - 130				
Carbon tetrachloride	22.59	1.0	20	0	113	70 - 130				
Chlorobenzene	20.15	1.0	20	0	101	70 - 114				
Chloroethane	24.65	1.0	20	0	123	70 - 130				
Chloroform	20.35	1.0	20	0	102	70 - 125				
Chloromethane	17.96	1.0	20	0	89.8	70 - 130				
cis-1,2-Dichloroethene	20.12	1.0	20	0	101	70 - 128				
cis-1,3-Dichloropropene	20.29	1.0	20	0	101	70 - 125				
Dibromochloromethane	19.95	1.0	20	0	99.8	70 - 124				
Ethylbenzene	20.87	1.0	20	0.3262	103	70 - 124				
m,p-Xylene	42.63	2.0	40	0	107	70 - 130				
Methylene chloride	21.45	2.0	20	0	107	70 - 128				
o-Xylene	20.97	1.0	20	0	105	70 - 124				
Styrene	20.5	1.0	20	0	102	70 - 130				
Tetrachloroethene	22.69	1.0	20	0	113	70 - 130				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0) **Instrument:** VOA4 **Method:** LOW LEVEL VOLATILES BY SW8260C

MS		Sample ID: HS20060287-01MS			Units: ug/L		Analysis Date: 13-Jun-2020 16:22			
Client ID:		Run ID: VOA4_363212			SeqNo: 5618618		PrepDate:		DF: 1	
Analyte	Result	MLL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Toluene	20.04	1.0	20	0	100	70 - 123				
trans-1,2-Dichloroethene	20.51	1.0	20	0	103	70 - 130				
trans-1,3-Dichloropropene	20.6	1.0	20	0	103	70 - 121				
Trichloroethene	21.74	1.0	20	0	109	70 - 129				
Vinyl acetate	41.1	1.0	40	0	103	70 - 130				
Vinyl chloride	19.99	1.0	20	0	99.9	70 - 130				
Xylenes, Total	63.59	1.0	60	0	106	70 - 130				
1,2-Dichloroethene, Total	40.63	1.0	40	0	102	70 - 130				
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>52.3</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>105</i>	<i>70 - 126</i>				
<i>Surr: 4-Bromofluorobenzene</i>	<i>51.01</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>81 - 113</i>				
<i>Surr: Dibromofluoromethane</i>	<i>52.22</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>77 - 123</i>				
<i>Surr: Toluene-d8</i>	<i>48.98</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>98.0</i>	<i>82 - 127</i>				

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C						
MSD	Sample ID: HS20060287-01MSD	Units: ug/L			Analysis Date: 13-Jun-2020 16:47					
Client ID:	Run ID: VOA4_363212	SeqNo: 5618619		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22	1.0	20	0	110	70 - 130	22.11	0.494	20	
1,1,2,2-Tetrachloroethane	20.33	1.0	20	0	102	70 - 123	20.04	1.45	20	
1,1,2-Trichloroethane	19.78	1.0	20	0	98.9	70 - 117	19.13	3.33	20	
1,1-Dichloroethane	20.12	1.0	20	0	101	70 - 127	20.36	1.21	20	
1,1-Dichloroethene	20.56	1.0	20	0	103	70 - 130	20.71	0.729	20	
1,2-Dichlorobenzene	20.31	1.0	20	0	102	70 - 115	20.43	0.562	20	
1,2-Dichloroethane	22.58	1.0	20	0	113	70 - 127	21.74	3.77	20	
1,2-Dichloropropane	20.5	1.0	20	0	103	70 - 122	20.22	1.38	20	
1,3-Dichlorobenzene	20.73	1.0	20	0	104	70 - 119	20.89	0.753	20	
1,4-Dichlorobenzene	19.97	1.0	20	0	99.9	70 - 114	20.25	1.39	20	
2-Butanone	45.12	2.0	40	0	113	70 - 130	42.11	6.9	20	
2-Hexanone	51.94	2.0	40	0	130	70 - 130	48.97	5.9	20	
4-Methyl-2-pentanone	51.37	2.0	40	0	128	70 - 130	47.3	8.26	20	
Acetone	47.84	2.0	40	0	120	70 - 130	43.19	10.2	20	
Benzene	20.07	1.0	20	0.3733	98.5	70 - 127	20.03	0.234	20	
Bromochloromethane	20.81	1.0	20	0	104	70 - 127	20.42	1.89	20	
Bromodichloromethane	20.63	1.0	20	0	103	70 - 124	20.17	2.23	20	
Bromoform	21.68	1.0	20	0	108	70 - 129	20.57	5.28	20	
Bromomethane	41.16	1.0	20	0	206	70 - 130	46.81	12.9	20	S
Carbon disulfide	41.74	2.0	40	0	104	70 - 130	42.35	1.46	20	
Carbon tetrachloride	22.05	1.0	20	0	110	70 - 130	22.59	2.42	20	
Chlorobenzene	19.87	1.0	20	0	99.4	70 - 114	20.15	1.4	20	
Chloroethane	22.94	1.0	20	0	115	70 - 130	24.65	7.16	20	
Chloroform	20.23	1.0	20	0	101	70 - 125	20.35	0.585	20	
Chloromethane	16.28	1.0	20	0	81.4	70 - 130	17.96	9.83	20	
cis-1,2-Dichloroethene	19.44	1.0	20	0	97.2	70 - 128	20.12	3.44	20	
cis-1,3-Dichloropropene	19.66	1.0	20	0	98.3	70 - 125	20.29	3.19	20	
Dibromochloromethane	20.55	1.0	20	0	103	70 - 124	19.95	2.97	20	
Ethylbenzene	21.1	1.0	20	0.3262	104	70 - 124	20.87	1.09	20	
m,p-Xylene	41.8	2.0	40	0	104	70 - 130	42.63	1.97	20	
Methylene chloride	21.31	2.0	20	0	107	70 - 128	21.45	0.638	20	
o-Xylene	20.85	1.0	20	0	104	70 - 124	20.97	0.589	20	
Styrene	21	1.0	20	0	105	70 - 130	20.5	2.41	20	
Tetrachloroethene	22.02	1.0	20	0	110	70 - 130	22.69	3.01	20	

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363212 (0)		Instrument: VOA4		Method: LOW LEVEL VOLATILES BY SW8260C						
MSD	Sample ID: HS20060287-01MSD	Units: ug/L			Analysis Date: 13-Jun-2020 16:47					
Client ID:	Run ID: VOA4_363212	SeqNo: 5618619		PrepDate:		DF: 1				
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Toluene	20.04	1.0	20	0	100	70 - 123	20.04	0.0218	20	
trans-1,2-Dichloroethene	20.5	1.0	20	0	102	70 - 130	20.51	0.0478	20	
trans-1,3-Dichloropropene	20.44	1.0	20	0	102	70 - 121	20.6	0.797	20	
Trichloroethene	20.82	1.0	20	0	104	70 - 129	21.74	4.34	20	
Vinyl acetate	42.61	1.0	40	0	107	70 - 130	41.1	3.61	20	
Vinyl chloride	19.57	1.0	20	0	97.9	70 - 130	19.99	2.1	20	
Xylenes, Total	62.64	1.0	60	0	104	70 - 130	63.59	1.51	20	
1,2-Dichloroethene, Total	39.94	1.0	40	0	99.8	70 - 130	40.63	1.71	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>53.18</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>70 - 126</i>	<i>52.3</i>	<i>1.66</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>51.22</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>81 - 113</i>	<i>51.01</i>	<i>0.399</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>50.57</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>77 - 123</i>	<i>52.22</i>	<i>3.21</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>49.95</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>99.9</i>	<i>82 - 127</i>	<i>48.98</i>	<i>1.95</i>	<i>20</i>	

The following samples were analyzed in this batch: HS20060314-02

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R362991 (0)		Instrument: WetChem_HS		Method: PH SOIL BY SW9045D						
DUP	Sample ID: HS20060271-05DUP	Units: pH Units		Analysis Date: 10-Jun-2020 14:15						
Client ID:	Run ID: WetChem_HS_362991	SeqNo: 5613574		PrepDate:		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.76	0.100					7.77	0.129	10	
Temp Deg C @pH	21.5	0					21.4	0.466	10	

The following samples were analyzed in this batch:

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363027 (0) Instrument: WetChem_HS Method: FLASH POINT BY PENSKY-MARTENS SW1010A

LCS	Sample ID: LCS-R363027	Units: °F				Analysis Date: 11-Jun-2020 08:00				
Client ID:	Run ID: WetChem_HS_363027	SeqNo: 5614679	PrepDate:	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ignitability 81.57 70.0 81 0 101 95 - 105

DUP	Sample ID: HS20060399-01DUP	Units: °F				Analysis Date: 11-Jun-2020 08:00				
Client ID:	Run ID: WetChem_HS_363027	SeqNo: 5614680	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: HS20060314-02

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

QC BATCH REPORT

Batch ID: R363048 (0)		Instrument: WetChem_HS		Method: PH BY SW9040C					
DUP	Sample ID: HS20060411-01DUP	Units: pH Units			Analysis Date: 11-Jun-2020 11:30				
Client ID:	Run ID: WetChem_HS_363048	SeqNo: 5615099		PrepDate:		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

pH	7.8	0.100					7.91	1.4	10
Temp Deg C @pH	20.2	0					20.3	0.494	10

The following samples were analyzed in this batch:

Client: Golder Associates Inc.
Project: Houston TX-Wood Preserving Works IDW
WorkOrder: HS20060314

**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/Kg-dry	Milligrams per Kilogram- Dry weight corrected
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
Dept of Defense	ANAB L2231 V009	22-Dec-2021
Florida	E87611-28	30-Jun-2020
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2019-2020	31-Jul-2020
Louisiana	03087, 2019-2020	30-Jun-2020
Maryland	343, 2019-2020	30-Jun-2020
North Carolina	624-2020	31-Dec-2020
Oklahoma	2019-141	31-Aug-2020
Texas	T104704231-20-26	30-Apr-2021

Sample Receipt Checklist

Work Order ID: HS20060314

Date/Time Received: 05-Jun-2020 13:20

Client Name: PBW

Received by: Nelson D. Dusara

Completed By: /S/ Nilesch D. Ranchod	07-Jun-2020 21:48	Reviewed by: /S/ Dane J. Wacasey	08-Jun-2020 18:03
eSignature	Date/Time	eSignature	Date/Time

Matrices: SOIL/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:216933
- 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):	1.3°C UC/C	IR25
Cooler(s)/Kit(s):	45931	
Date/Time sample(s) sent to storage:	06/05/2020 19:00	

- 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: 5035/1005 placed in freezer 6/5/2020 19:00

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody For

Page 5 of 5

COC ID: 216933

HS20060314

Golder Associates Inc.
Houston TX-Wood Preserving Works IDW

n, WV
3

ALS Project Manager:



Customer Information		Project Information	
Purchase Order	UPRR/Kevin Peterburs	Project Name	Houston TX-Wood Preserving Works
Work Order		Project Number	1620-13-Rev0 SR 92688
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 Suite 4004	Address	1400 Douglas Street
			Stop 0750
City/State/Zip	Round Rock, TX 78664	City/State/Zip	Omaha NE 681790750
Phone	(512) 671-3434	Phone	
Fax	(512) 671-3446	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	SO-1620-DRUM01-20200605	6-5-20	1130	Solid	8	3	X	X	X	X		X					
2	VVV-1620-DRUM02-20200605	-	1140	Water	1,2,8	10	X	X	X		X	X	X				
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <i>Blake Skora</i>		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
Relinquished by: <i>Blake Skora</i>		Date: 6-5-20	Time: 13:20	Received by:		<input checked="" type="checkbox"/> STD 10 Wk Days		<input type="checkbox"/> 5 Wk Days	
Relinquished by:		Date: 6/6/20	Time: 13:20	Received by (Laboratory): <i>Nelson</i>		Notes: UPRR HWPW 1620-13		QC Package: (Check One Box Below)	
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		Cooler ID: 45931	Cooler Temp.: 1.3	<input checked="" type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC/Raw Date <input type="checkbox"/> Level IV SWM/CLP <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									

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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