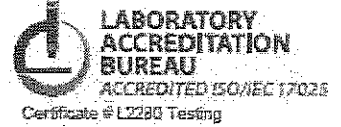




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



Date: 7/27/2017
Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
To: RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604
From: Kristen Leckrone, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Kristen Leckrone 7/27/17

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

Data Coordinator and Date Transmitted

Analyses included in this report:

TCLP/ZHE VOLATILES



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

General Information

Twenty-five solid, liquid and mixed waste samples were received on 5/05/2017 for prepared for analysis by the toxicity characteristic leaching procedure (TCLP) using zero headspace extraction (ZHE) by analysts Troy Strock, Danielle Kleinmaier and Greg Mitsakopoulos. The TCLP extracts were subjected to volatile organics analysis (VOA). The designated VOA analyst, Kristen Leckrone, can be reached at (312) 353-9068. The TCLP procedure has a 14-day holding time from sample collection to TCLP preparation, and an additional 14-day holding time from TCLP preparation to volatile organics analysis. Some samples exceeded their preparation and/or analysis holding times. See the Quality Control (QC) section for more details. All samples were refrigerated at ≤ 6 C when not in use.

Sample Analysis

TCLP preparation of the samples followed Chicago Regional Laboratory (CRL) Standard Operating Procedure (SOP) GEN019 Ver. 5, based on SW-846 Method 1311. VOA in most of the TCLP extracts followed CRL SOP MS023 Ver.5, based on SW-846 reference method 8260C for VOA in water. The following modifications were required to analyze samples not amenable to standard VOA in aqueous samples. These analyses were conducted by Danielle Kleinmaier.

Samples 1705002-02, 1705002-09 and 1705003-02 produced water-immiscible TCLP extracts, while samples 1705003-01 and 1705003-03 produced extracts with limited water miscibility. Many of these samples were also extremely viscous. These five TCLP extracts were analyzed for volatile compounds by first performing a methanol extraction of a measured mass of extract, for which corresponding volumes were calculated through density, as measured at CRL. This portion of the procedure followed CRL SOP MS001 Ver. 4. The methanol extracts were diluted in water at the bench and analyzed per MS023. Results from methanol extracts are reported in mg/L, after accounting for dilution. In some cases, the water-immiscible extract was miscible with methanol, and dilution factors were adjusted to account for the altered final volume, resulting in dilution factors intermediate between standard 10x, 100x or 1000x dilutions. Dilution factors for these and all other samples are documented in the LIMS-report.

Samples 1705002-04, 1705002-08 and 1705002-12 each produced two immiscible TCLP fractions: a water-immiscible 1st filtrate and an aqueous, leached 2nd filtrate. For each sample, the two immiscible TCLP fractions were assigned distinct laboratory identifiers (ID), as shown in the sample ID table of this report. Immiscible fractions were analyzed separately, as follows. The water-immiscible 1st filtrate was methanol-extracted, diluted, and analyzed in the same way as the other water-immiscible extracts described above. The aqueous 2nd filtrate was directly analyzed per MS023. The separate analyses were mathematically combined using a volume-weighted average, per GEN019. The combined final results are reported under the original sample id number. Results from the separate analyses are included in this report to document the input concentrations for the volume-weighted averages as well as to document acceptable surrogate recovery. However, only the final, calculated result reported under the original sample ID should be compared to the TCLP regulatory limits.

One highly alkaline sample (1705003-08) was acidified with 1:1 HCl-H₂O to a pH of 6 as per pen-and-ink change #10392 prior to analysis per MS023.



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Regardless of the preparation method, all extracts were analyzed for the subset of volatile organic analytes listed in 40 CFR Part 261.24, and data were evaluated against the regulatory limits listed therein. Data were reviewed according to the guidelines described in CRL SOP GEN010 Version 2: Organics Data Verification, hereafter referred to as GEN010.

Sample Results

The data reported in this package meet the requirements in MS023, GEN010, and the Quality Assurance Project Plan for Field Sampling Events at Mid-America Steel Drum, Inc, dated April 19, 2017, except as noted in the Quality Control section below.

Methyl ethyl ketone (2-butanone) in sample 1705002-04 (36,300 mg/L) was above the TCLP regulatory limit of 200 mg/L. This result is a weighted average of immiscible fractions.

Benzene in samples 1705002-01 (0.571 mg/L), 1705002-02 (0.683 mg/L), and 1705002-09 (9.26 mg/L) also exceeded the TCLP regulatory limit of 0.50 mg/L.

Target compounds were either not detected, or were present below TCLP regulatory limits in all other field samples. (Please note that samples 1705002-14, -15, -16, -17, -18 and -20 are measurements on separated fractions of biphasic field samples and are not directly comparable to TCLP regulatory limits).

Detailed results are included in the attached report and electronic spreadsheet.

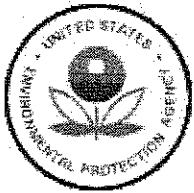
Quality Control

All Quality Control (QC) audits were within CRL limits for all analytes, or did not result in qualification of data, except as discussed below. Discussion of QC is organized first by QC parameter, then by batch when appropriate.

Holding times and sample preservation.

Holding times (14-days) between sampling and TCLP extraction were exceeded for the following samples: 1705002-04, 1705002-08, 1705002-12, 1705002-14, 1705002-15, 1705002-16, 1705002-17, 1705002-18 and 1705002-20. Additionally, 14-day holding times between TCLP extraction and VOA analysis were exceeded for the following sample injections or re-injections from which data are reported: 1705002-02, 1705002-06, 1705002-06RE1 (reported only as source sample for B17F008-MS1 and -MSD1), 1705002-06RE2, 1705002-08, 1705002-09, 1705002-10RE1, 1705002-11RE1, 1705002-13, 1705002-17, 1705003-01, 1705003-02, 1705003-03, 1705003-04RE1, 1705003-05, 1705003-07, and 1705004-09, as well as TCLP preparation blanks collected on 5/15 (B17F014-BLK2) and 5/19 (B17F014-BLK3). All affected data are qualified "H" in the sample header. Since in VOA the consequence of excessive holding time is generally potential loss of the volatile analytes, the reported concentrations may under-estimate the actual concentrations in the samples as received.

Additionally, leachates, filtrates and/or extracts produced from the following samples were either stored with or generated headspace in the vial: 1705002-02, 1705002-14, 1705002-15, 1705002-16 and 1705002-18, and 1705003-07. Since these samples are already qualified for exceeding holding time limits, additional qualifiers were not required. Sample pH is measured/adjusted/controlled by the TCLP extraction procedure so separate pH measurement and adjustment by the VOA



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analyst were not required, except for sample 1705003-08 as discussed above.

Initial calibration.

Two instrument calibrations were used for these analyses. The first calibration applies to batches B17G019, B17G020 and B17G021. The purge & trap interface was cleaned and baked and the instrument re-calibrated prior analysis of batches B17F006, B17F008 and B17F014. All QC requirements for each initial calibration were met.

Continuing calibration verification.

Batch B17F104. The recovery of 2-butanone exceeded the upper QC limit in the mid-sequence CCV and the ending CCV of this batch. The following samples were flagged 'K', (CCV) for 2-butanone: B17F014-BLK3, 1705002□16, 1705002□18, 1705002□09, B17F014-MS1, and B17F014-MSD1.

Blank spike/blank spike duplicate.

Batch B17G019. Carbon tetrachloride recovery was low in the blank spike duplicate and is qualified UJ for non-detects in the associated samples that are reported.

Batch B17G020. Carbon tetrachloride recovery was low in the blank spikes and is qualified UJ for non-detects in the associated samples that are reported.

Batch B17G021. 2-Butanone recovery was low in BS3, BSD1, and BSD2. It is qualified UJ for non-detects and L for potential low bias in the associated samples that are reported.

Batch B17G021. Carbon tetrachloride recovery was low in all blank spikes. It is qualified UJ for non-detects in the associated samples that are reported.

Batch B17G021. Trichloroethene had high recovery in BSD3. It was not detected in associated samples, so no data were flagged.

Internal standards.

Batch B17F104. The following samples had low recovery of 1,4-dichlorobenzene-d4: 1705002-09, -18, B17F014-MS1, and -MSD1. This is most likely due to a matrix interference. The only analyte affected is 1,4-dichlorobenzene, which is flagged 'J' (IS) in these samples.

Batch B17G019: In sample 1705003-06, the internal standard fluorobenzene had a retention time shift of +0.63 minutes, although it's area recovery was acceptable, and the internal standard 1,4-dichlorobenzene-D4 eluted at the correct retention time but with low recovery. Target analytes quantified relative to these two internal standards are flagged J, "IS". (All target compounds in this sample are also qualified J due to failure of the surrogates, see next section).

Surrogate recovery.

General considerations. Individual surrogate standards, especially dibromofluoromethane, were recovered low in multiple samples. Per MS023 and GEN010 guidance, qualification of samples for failed surrogates is not required unless three or more surrogates fail in a sample.

Batch B17F014. The recoveries of all surrogates in sample 1705002-09 were outside QC limits. Dibromofluoromethane recovered high while 1,2-dichloroethane-d4 and 4-bromofluorobenzene recovered low. Toluene-d8 was not recovered at



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all. This is all most likely due to matrix interferences. The entire sample is qualified "SURR", and all target analytes in 1705002-09 are also qualified 'J' unless superceded by other, more specific qualifiers. The surrogate recoveries in the matrix spikes were similar to the native sample above; all the target analytes in B17F014-MS1/-MSD1 are qualified 'J' and the entire QC samples qualified "SURR".

Batch B17G019. Three surrogates in 1705003-06 were recovered below the lower QC limit. The entire sample is qualified "SURR" and all target analytes are also qualified "J", estimated.

Surrogate standards are not reported for 1705002-04, 1705002-08 or 1705002-12, which are calculated results rather than direct measurements. Surrogate recoveries for the measured field samples used in the calculation of these standards are reported in samples 1705002-14, 1705002-15, 1705002-16, 1705002-17, 1705002-18 and 1705002-20. All surrogates in the contributing samples were within QC limits except for 1705002-18, in which two surrogates failed, but this did not result in sample qualification.

Matrix spike/matrix spike duplicates (MS/MSD)

Matrix spikes were prepared in volumetric flasks during the bench dilutions of field samples. Thus, they are spikes of the 100x or 1000x diluted matrix, rather than spikes of the undiluted matrix. Since the spikes were added after dilution, MS results are not adjusted for the dilution factor, and are best calculated relative to the source sample's signal uncorrected for dilution. This allows the recovery of the spiked target compounds to calculate correctly.

Batch B17G021. For the MS2/MSD2, the QC check is irrelevant for 2-butanone, whose concentration in the source sample was >50% of the spike level. No data were flagged for this compound based on the MS2/MSD2.

Batch B17G021. Carbon tetrachloride recovery was low in the matrix spikes. It is qualified UJ for non-detects in the associated samples that are reported.

Batch B17F014. In both the B17F014-MS and -MSD, trichloroethene recovered low while carbon tetrachloride was not recovered at all. Trichloroethene is therefore flagged 'J' (MS) in the native sample and carbon tetrachloride is flagged 'R' (MS). Surrogate recoveries in the B17F014-MS and -MSD are addressed in the "surrogate recovery" QC section. Benzene and 1,4-dichlorobenzene also had low recoveries in the -MSD and are flagged J, estimated, in the source sample.

Batches B17F006, B17G019, and B17G020 did not include MS/MSDs.

Method blanks.

As described in the sample analysis section, field samples were prepared as TCLP filtrates and/or leachates, and if needed, further processed by methanol extraction, and in one instance acidification, before the VOA analysis. A blank relevant to every preparative step was prepared, analyzed, and evaluated relative to all field samples associated with that step. Per MS023 and GEN010, for any given target analyte, a result must be qualified "B", potentially affected by blank, if the analyte concentration is above the reporting limit but less than five times the concentration of any relevant blank. All the procedural blanks, as well as the daily method blanks, had results below the reporting limit, and did not result in qualification of associated sample data, with the following exception:

The 5/19/17 leaching blank, analyzed as B17F014-BLK3 and also as B17G019-BLK3, contained 2-butanone above the



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reporting limit. The higher measurement, that in B17F014-BLK3, was used to evaluate the blank's impact on its associated samples. Two samples, 1705004-07 and 1705004-08, had 2-butanone results within five times the level of the blank, and are qualified "B", as well as "K" to indicate that the blank may have biased the results high. All other associated samples were either non-detect or greater than five times the level in the blank. 1705002-05RE (>5x), 1705002-06 (>5x), 1705002-10 (>5x), 1705002-11 (>5x), 1705003-04 (ND), 1705004-10RE (ND).

Reporting Limits checks.

All reporting limit checks were met in all reporting limit check samples, and reporting limits for all target compounds in all field samples are below the TCLP regulatory limits, with the following exceptions:

The reporting limits for all compounds in calculated sample **1705002-04** and its contributing samples **1705002-14** and **1705002-15** exceed the TCLP regulatory limits. This was an unavoidable consequence of the extremely high dilutions required to keep the massive 2-butanone peak within the calibration range. The contributing samples could not be analyzed at lower dilution without risk of damaging the purge-and-trap concentrator.

In the calculated sample **1705002-12**, reporting limits for vinyl chloride, 1,1-dichloroethene, carbon tetrachloride, benzene, 1,2-dichloroethane, trichloroethene, and tetrachloroethene exceed TCLP regulatory limits. In its contributing sample **1705002-18**, vinyl chloride and carbon tetrachloride exceed TCLP regulatory limits, while in contributing sample **1705002-20**, vinyl chloride, 1,1-dichloroethene, carbon tetrachloride, benzene, 1,2-dichloroethane, trichloroethene and tetrachloroethene, reporting limits exceed TCLP regulatory limits. The high reporting limits are the unavoidable consequence of the limited mass of the filtrate available for methanol filtration of 1705002-18 (0.8 g, well below the 5 g required by the procedure), as well as a moderately high dilution required to keep 2-butanone on scale in 1705002-20.

This project encompasses work orders (WO's) 1705002, 1705003 and 1705003. Hard copy of all QC data and other supporting information for both WO1705003 and WO1705004 are filed at CRL under WO 1705002.



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This project encompasses work orders (WO's) 1705002, 1705003 and 1705004. Hard copy of all QC data and other supporting information for both WO1705003 and WO1705004 are filed at CRL under WO 1705002.



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This project encompasses work orders (WO's) 1705002, 1705003 and 1705003. Hard copy of all QC data and other supporting information for both WO1705003 and WO1705004 are filed at CRL under WO 1705002.



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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-02	1705002-02	Other	May-04-17 13:11	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-04	1705002-04	Other	May-04-17 14:10	May-05-17 07:50
OCS-05	1705002-05	Other	May-04-17 14:23	May-05-17 07:50
OCS-06	1705002-06	Other	May-04-17 14:37	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
OCS-08	1705002-08	Other	May-04-17 15:01	May-05-17 07:50
OCS-09	1705002-09	Other	May-04-17 15:12	May-05-17 07:50
OCS-10	1705002-10	Other	May-04-17 15:20	May-05-17 07:50
OCS-10 DUP	1705002-11	Other	May-04-17 15:20	May-05-17 07:50
OCS-11	1705002-12	Other	May-04-17 15:37	May-05-17 07:50
OCS-12	1705002-13	Other	May-04-17 15:50	May-05-17 07:50
1705002-04 1st Filtrate	1705002-14	Other	May-04-17 14:10	May-05-17 07:50
1705002-04 2nd Filtrate	1705002-15	Other	May-04-17 14:10	May-05-17 07:50
1705002-08 1st Filtrate	1705002-16	Other	May-04-17 15:01	May-05-17 07:50
1705002-08 2nd Filtrate	1705002-17	Other	May-04-17 15:01	May-05-17 07:50
1705002-12 1st Filtrate 1st Phase	1705002-18	Other	May-04-17 15:37	May-05-17 07:50
1705002-12 2nd Filtrate	1705002-20	Other	May-04-17 15:37	May-05-17 07:50
CS-01	1705003-01	Other	May-04-17 11:48	May-05-17 07:50
CS-02	1705003-02	Other	May-04-17 12:31	May-05-17 07:50
CS-03	1705003-03	Other	May-04-17 12:35	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50



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CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50
CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-07	1705003-07	Other	May-04-17 13:55	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50
SFS09	1705004-08	Other	May-04-17 15:23	May-05-17 07:50
SFS10	1705004-09	Other	May-04-17 15:37	May-05-17 07:50
SFS10 Dup	1705004-10	Other	May-04-17 15:37	May-05-17 07:50



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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-01 (1705002-01RE1)

Matrix: Other

Sampled: May-04-17 12:55

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G020	May-15-17	May-27-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	0.571			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	Flags / Qualifiers	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	4.17E-3	Q	41.7%	75-125	"	"	"
1,2-Dichloroethane-d4	9.30E-3		93.0%	75-125	"	"	"
Toluene-d8	9.76E-3		97.6%	75-125	"	"	"
4-Bromofluorobenzene	9.00E-3		90.0%	75-125	"	"	"

OCS-02 (1705002-02)

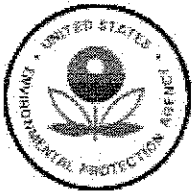
Matrix: Other

Sampled: May-04-17 13:11

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.138	mg/L	156.93	B17F014	May-15-17	Jun-08-17
1,1-Dichloroethene	U			0.345	"	"	"	"	"
2-Butanone	U			0.689	"	"	"	"	"
Chloroform	U			0.138	"	"	"	"	"
Carbon tetrachloride	U			0.345	"	"	"	"	"
Benzene	0.683			0.138	"	"	"	"	"
1,2-Dichloroethane	U			0.138	"	"	"	"	"
Trichloroethene	U			0.138	"	"	"	"	"



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Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory

OCS-02 (1705002-02) Matrix: Other Sampled: May-04-17 13:11 Received: May-05-17 07:50
 Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Tetrachloroethene	U			0.345	mg/L	156.93	B17F014	May-15-17	Jun-08-17
Chlorobenzene	U			0.138	"	"	"	"	"
1,4-Dichlorobenzene	U			0.345	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	9.34E-3		106%	75-125	"	"	"
1,2-Dichloroethane-d4	7.53E-3		85.7%	75-125	"	"	"
Toluene-d8	8.62E-3		98.0%	75-125	"	"	"
4-Bromofluorobenzene	8.91E-3		101%	75-125	"	"	"

OCS-03 (1705002-03RE1) Matrix: Other Sampled: May-04-17 13:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G020	May-15-17	May-27-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	4.46E-3	Q	44.6%	75-125	"	"	"
1,2-Dichloroethane-d4	9.22E-3		92.2%	75-125	"	"	"
Toluene-d8	9.99E-3		99.9%	75-125	"	"	"
4-Bromofluorobenzene	9.88E-3		98.8%	75-125	"	"	"



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-04 (1705002-04)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			195	mg/L	1	B17F008	May-24-17	Jun-07-17
1,1-Dichloroethene	U			489	"	"	"	"	"
2-Butanone	36300			978	"	"	"	"	"
Chloroform	U			195	"	"	"	"	"
Carbon tetrachloride	U			489	"	"	"	"	"
Benzene	U			195	"	"	"	"	"
1,2-Dichloroethane	U			195	"	"	"	"	"
Trichloroethene	U			195	"	"	"	"	"
Tetrachloroethene	U			489	"	"	"	"	"
Chlorobenzene	U			195	"	"	"	"	"
1,4-Dichlorobenzene	U			489	"	"	"	"	"

OCS-05 (1705002-05)

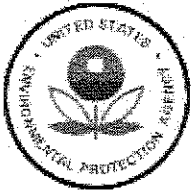
Matrix: Other

Sampled: May-04-17 14:23

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G019	May-18-17	May-26-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	9.80E-3	98.0%	75-125	"	"	"
1,2-Dichloroethane-d4	0.0101	101%	75-125	"	"	"
Toluene-d8	9.38E-3	93.8%	75-125	"	"	"
4-Bromofluorobenzene	9.54E-3	95.4%	75-125	"	"	"



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-05 (1705002-05RE1) Matrix: Other Sampled: May-04-17 14:23 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Butanone	109			5.00	mg/L	1000	B17G020	May-18-17	May-27-17
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
<i>Dibromofluoromethane</i>	5.27E-3	Q		52.7%		75-125	"	"	"
<i>1,2-Dichloroethane-d4</i>	9.09E-3			90.9%		75-125	"	"	"
<i>Toluene-d8</i>	9.57E-3			95.7%		75-125	"	"	"
<i>4-Bromofluorobenzene</i>	9.76E-3			97.6%		75-125	"	"	"

OCS-06 (1705002-06) Matrix: Other Sampled: May-04-17 14:37 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Butanone	57.0			5.00	mg/L	1000	B17F008	May-18-17	Jun-07-17
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
<i>Dibromofluoromethane</i>	0.0106			106%		75-125	"	"	"
<i>1,2-Dichloroethane-d4</i>	0.0101			101%		75-125	"	"	"
<i>Toluene-d8</i>	9.62E-3			96.2%		75-125	"	"	"
<i>4-Bromofluorobenzene</i>	9.95E-3			99.5%		75-125	"	"	"

OCS-06 (1705002-06RE2) Matrix: Other Sampled: May-04-17 14:37 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-02-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-06 (1705002-06RE2)

Matrix: Other

Sampled: May-04-17 14:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	7.08E-3	Q		70.8%		75-125	B17G021	May-18-17	Jun-02-17
1,2-Dichloroethane-d4	9.43E-3			94.3%		75-125	"	"	"
Toluene-d8	9.63E-3			96.3%		75-125	"	"	"
4-Bromofluorobenzene	9.68E-3			96.8%		75-125	"	"	"

OCS-07 (1705002-07RE1)

Matrix: Other

Sampled: May-04-17 14:50

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G020	May-15-17	May-27-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	5.44			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	4.07E-3	Q		40.7%		75-125	"	"	"
1,2-Dichloroethane-d4	9.51E-3			95.1%		75-125	"	"	"
Toluene-d8	9.65E-3			96.5%		75-125	"	"	"
4-Bromofluorobenzene	9.89E-3			98.9%		75-125	"	"	"

OCS-08 (1705002-08)

Matrix: Other

Sampled: May-04-17 15:01

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.104	mg/L	1	B17F014	May-24-17	Jun-08-17
1,1-Dichloroethene	U			0.260	"	"	"	"	"



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Chicago Regional Laboratory**

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

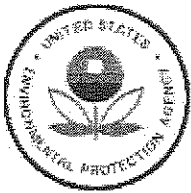
OCS-08 (1705002-08) Matrix: Other Sampled: May-04-17 15:01 Received: May-05-17 07:50
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Butanone	0.626	J		0.519	mg/L	1	B17F014	May-24-17	Jun-08-17
Chloroform	U			0.104	"	"	"	"	"
Carbon tetrachloride	U			0.260	"	"	"	"	"
Benzene	U			0.104	"	"	"	"	"
1,2-Dichloroethane	U			0.104	"	"	"	"	"
Trichloroethene	U			0.104	"	"	"	"	"
Tetrachloroethene	U			0.260	"	"	"	"	"
Chlorobenzene	U			0.104	"	"	"	"	"
1,4-Dichlorobenzene	U			0.260	"	"	"	"	"

OCS-09 (1705002-09) Matrix: Other Sampled: May-04-17 15:12 Received: May-05-17 07:50
Sample Qualifiers: (H), (SURR)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U	J		0.142	mg/L	154.46	B17F014	May-15-17	Jun-08-17
1,1-Dichloroethene	U	J		0.354	"	"	"	"	"
2-Butanone	47.1	(CCV), K		0.709	"	"	"	"	"
Chloroform	U	J		0.142	"	"	"	"	"
Carbon tetrachloride	Rejected	(MS)		0.354	"	"	"	"	"
Benzene	9.26	J		0.142	"	"	"	"	"
1,2-Dichloroethane	U	J		0.142	"	"	"	"	"
Trichloroethene	U	(MS), J		0.142	"	"	"	"	"
Tetrachloroethene	U	J		0.354	"	"	"	"	"
Chlorobenzene	U	J		0.142	"	"	"	"	"
1,4-Dichlorobenzene	U	(IS), J		0.354	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0117	Q	127%	75-125	"	"	"
1,2-Dichloroethane-d4	6.22E-3	Q	67.8%	75-125	"	"	"
Toluene-d8	0.00	Q	%	75-125	"	"	"
4-Bromofluorobenzene	6.53E-3	Q	71.2%	75-125	"	"	"



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-10 (1705002-10) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Butanone	67.7	L		5.00	mg/L	1000	B17G021	May-18-17	Jun-01-17
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
<i>Dibromofluoromethane</i>	6.12E-3	Q		61.2%		75-125	"	"	"
<i>1,2-Dichloroethane-d4</i>	9.83E-3			98.3%		75-125	"	"	"
<i>Toluene-d8</i>	0.0102			102%		75-125	"	"	"
<i>4-Bromofluorobenzene</i>	9.78E-3			97.8%		75-125	"	"	"

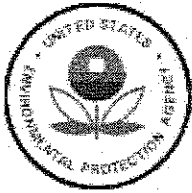
OCS-10 (1705002-10RE1) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-02-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
<i>Dibromofluoromethane</i>	7.32E-3	Q		73.2%		75-125	"	"	"
<i>1,2-Dichloroethane-d4</i>	9.17E-3			91.7%		75-125	"	"	"
<i>Toluene-d8</i>	9.57E-3			95.7%		75-125	"	"	"
<i>4-Bromofluorobenzene</i>	0.0102			102%		75-125	"	"	"

OCS-10 DUP (1705002-11) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Butanone	63.4	L		5.00	mg/L	1000	B17G021	May-18-17	Jun-01-17
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-10 DUP (1705002-11)

Matrix: Other

Sampled: May-04-17 15:20

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	6.16E-3	Q		61.6%		75-125	B17G021	May-18-17	Jun-01-17
1,2-Dichloroethane-d4	9.38E-3			93.8%		75-125	"	"	"
Toluene-d8	9.88E-3			98.8%		75-125	"	"	"
4-Bromofluorobenzene	0.0104			104%		75-125	"	"	"

OCS-10 DUP (1705002-11RE1)

Matrix: Other

Sampled: May-04-17 15:20

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-02-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	7.62E-3			76.2%		75-125	"	"	"
1,2-Dichloroethane-d4	9.25E-3			92.5%		75-125	"	"	"
Toluene-d8	9.59E-3			93.9%		75-125	"	"	"
4-Bromofluorobenzene	0.0101			101%		75-125	"	"	"

OCS-11 (1705002-12)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.994	mg/L	1	B17F014	May-24-17	Jun-07-17
1,1-Dichloroethene	U			2.49	"	"	"	"	"
2-Butanone	120	J		4.97	"	"	"	"	"



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-11 (1705002-12)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Chloroform	U			0.994	mg/L	1	B17F014	May-24-17	Jun-07-17
Carbon tetrachloride	U			2.49	"	"	"	"	"
Benzene	U	J		0.994	"	"	"	"	"
1,2-Dichloroethane	U			0.994	"	"	"	"	"
Trichloroethene	U			0.994	"	"	"	"	"
Tetrachloroethene	U			2.49	"	"	"	"	"
Chlorobenzene	U			0.994	"	"	"	"	"
1,4-Dichlorobenzene	U			2.49	"	"	"	"	"

OCS-12 (1705002-13)

Matrix: Other

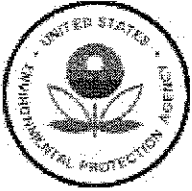
Sampled: May-04-17 15:50

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G020	May-11-17	May-26-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	Flags / Qualifiers	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	6.64E-3	Q	66.4%	75-125	"	"	"
1,2-Dichloroethane-d4	9.72E-3		97.2%	75-125	"	"	"
Toluene-d8	9.43E-3		94.3%	75-125	"	"	"
4-Bromofluorobenzene	0.0100		100%	75-125	"	"	"



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified) US EPA Region 5 Chicago Regional Laboratory

1705002-04 1st Filtrate (1705002-14)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			1060	mg/L	1000000	B17F006	May-24-17	Jun-06-17
1,1-Dichloroethene	U			2660	"	"	"	"	"
2-Butanone	2.57E5			5320	"	"	"	"	"
Chloroform	U			1060	"	"	"	"	"
Carbon tetrachloride	U			2660	"	"	"	"	"
Benzene	U			1060	"	"	"	"	"
1,2-Dichloroethane	U			1060	"	"	"	"	"
Trichloroethene	U			1060	"	"	"	"	"
Tetrachloroethene	U			2660	"	"	"	"	"
Chlorobenzene	U			1060	"	"	"	"	"
1,4-Dichlorobenzene	U			2660	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0128	120%	75-125	"	"	"
1,2-Dichloroethane-d4	0.0111	104%	75-125	"	"	"
Toluene-d8	0.0104	97.7%	75-125	"	"	"
4-Bromofluorobenzene	0.0107	101%	75-125	"	"	"

1705002-04 2nd Filtrate (1705002-15)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			100	mg/L	100000	B17F008	May-24-17	Jun-07-17
1,1-Dichloroethene	U			250	"	"	"	"	"
2-Butanone	12000			500	"	"	"	"	"
Chloroform	U			100	"	"	"	"	"
Carbon tetrachloride	U			250	"	"	"	"	"
Benzene	U			100	"	"	"	"	"
1,2-Dichloroethane	U			100	"	"	"	"	"
Trichloroethene	U			100	"	"	"	"	"
Tetrachloroethene	U			250	"	"	"	"	"
Chlorobenzene	U			100	"	"	"	"	"
1,4-Dichlorobenzene	U			250	"	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) US EPA Region 5 Chicago Regional Laboratory

1705002-04 2nd Filtrate (1705002-15)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0118			118%		75-125	B17F008	May-24-17	Jun-07-17
1,2-Dichloroethane-d4	0.0102			102%		75-125	"	"	"
Toluene-d8	0.0100			100%		75-125	"	"	"
4-Bromofluorobenzene	9.52E-3			95.2%		75-125	"	"	"

1705002-08 1st Filtrate (1705002-16)

Matrix: Other

Sampled: May-04-17 15:01

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.157	mg/L	146.92	B17F014	May-24-17	Jun-07-17
1,1-Dichloroethene	U			0.392	"	"	"	"	"
2-Butanone	9.28	(CCV), K		0.783	"	"	"	"	"
Chloroform	U			0.157	"	"	"	"	"
Carbon tetrachloride	U			0.392	"	"	"	"	"
Benzene	U			0.157	"	"	"	"	"
1,2-Dichloroethane	U			0.157	"	"	"	"	"
Trichloroethene	U			0.157	"	"	"	"	"
Tetrachloroethene	U			0.392	"	"	"	"	"
Chlorobenzene	U			0.157	"	"	"	"	"
1,4-Dichlorobenzene	U			0.392	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0132			123%		75-125	"	"	"
1,2-Dichloroethane-d4	0.0107			100%		75-125	"	"	"
Toluene-d8	0.0111			104%		75-125	"	"	"
4-Bromofluorobenzene	0.0102			95.7%		75-125	"	"	"

1705002-08 2nd Filtrate (1705002-17)

Matrix: Other

Sampled: May-04-17 15:01

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17F014	May-24-17	Jun-08-17



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

1705002-08 2nd Filtrate (1705002-17)

Matrix: Other

Sampled: May-04-17 15:01

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
1,1-Dichloroethene	U			0.250	mg/L	100	B17F014	May-24-17	Jun-08-17
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U			0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0114	114%	75-125	"	"	"
1,2-Dichloroethane-d4	8.57E-3	85.7%	75-125	"	"	"
Toluene-d8	9.91E-3	99.1%	75-125	"	"	"
4-Bromofluorobenzene	0.0102	102%	75-125	"	"	"

1705002-12 1st Filtrate 1st Phase (1705002-18)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.217	mg/L	38.99	B17F014	May-24-17	Jun-07-17
1,1-Dichloroethene	U			0.542	"	"	"	"	"
2-Butanone	63.0	(CCV), K		1.08	"	"	"	"	"
Chloroform	U			0.217	"	"	"	"	"
Carbon tetrachloride	U			0.542	"	"	"	"	"
Benzene	14.5			0.217	"	"	"	"	"
1,2-Dichloroethane	U			0.217	"	"	"	"	"
Trichloroethene	U			0.217	"	"	"	"	"
Tetrachloroethene	U			0.542	"	"	"	"	"
Chlorobenzene	U			0.217	"	"	"	"	"
1,4-Dichlorobenzene	U	(IS), J		0.542	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

1705002-12 1st Filtrate 1st Phase (1705002-18)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0581			105%		75-125	B17F014	May-24-17	Jun-07-17
1,2-Dichloroethane-d4	0.0404	Q		72.8%		75-125	"	"	"
Toluene-d8	0.00	Q		%		75-125	"	"	"
4-Bromofluorobenzene	0.0564			102%		75-125	"	"	"

1705002-12 2nd Filtrate (1705002-20)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			1.00	mg/L	1000	B17F008	May-24-17	Jun-07-17
1,1-Dichloroethene	U			2.50	"	"	"	"	"
2-Butanone	120			5.00	"	"	"	"	"
Chloroform	U			1.00	"	"	"	"	"
Carbon tetrachloride	U			2.50	"	"	"	"	"
Benzene	U			1.00	"	"	"	"	"
1,2-Dichloroethane	U			1.00	"	"	"	"	"
Trichloroethene	U			1.00	"	"	"	"	"
Tetrachloroethene	U			2.50	"	"	"	"	"
Chlorobenzene	U			1.00	"	"	"	"	"
1,4-Dichlorobenzene	U			2.50	"	"	"	"	"

Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0115			115%		75-125	"	"	"
1,2-Dichloroethane-d4	9.97E-3			99.7%		75-125	"	"	"
Toluene-d8	9.65E-3			96.5%		75-125	"	"	"
4-Bromofluorobenzene	9.94E-3			99.4%		75-125	"	"	"

CS-01 (1705003-01)

Matrix: Other

Sampled: May-04-17 11:48

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.163	mg/L	144.21	B17F014	May-15-17	Jun-08-17



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory

CS-01 (1705003-01) Matrix: Other Sampled: May-04-17 11:48 Received: May-05-17 07:50
 Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
1,1-Dichloroethene	U			0.408	mg/L	144.21	B17F014	May-15-17	Jun-08-17
2-Butanone	U			0.816	"	"	"	"	"
Chloroform	U			0.163	"	"	"	"	"
Carbon tetrachloride	U			0.408	"	"	"	"	"
Benzene	U			0.163	"	"	"	"	"
1,2-Dichloroethane	U			0.163	"	"	"	"	"
Trichloroethene	U			0.163	"	"	"	"	"
Tetrachloroethene	U			0.408	"	"	"	"	"
Chlorobenzene	U			0.163	"	"	"	"	"
1,4-Dichlorobenzene	U			0.408	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0126	111%	75-125	"	"	"
1,2-Dichloroethane-d4	9.81E-3	86.7%	75-125	"	"	"
Toluene-d8	0.0114	101%	75-125	"	"	"
4-Bromofluorobenzene	0.0109	96.3%	75-125	"	"	"

CS-02 (1705003-02) Matrix: Other Sampled: May-04-17 12:31 Received: May-05-17 07:50
 Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.0967	mg/L	100	B17F014	May-15-17	Jun-08-17
1,1-Dichloroethene	U			0.242	"	"	"	"	"
2-Butanone	U			0.484	"	"	"	"	"
Chloroform	U			0.0967	"	"	"	"	"
Carbon tetrachloride	U			0.242	"	"	"	"	"
Benzene	U			0.0967	"	"	"	"	"
1,2-Dichloroethane	U			0.0967	"	"	"	"	"
Trichloroethene	U			0.0967	"	"	"	"	"
Tetrachloroethene	U			0.242	"	"	"	"	"
Chlorobenzene	U			0.0967	"	"	"	"	"
1,4-Dichlorobenzene	U			0.242	"	"	"	"	"



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

CS-02 (1705003-02) Matrix: Other Sampled: May-04-17 12:31 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	9.54E-3			98.6%		75-125	B17F014	May-15-17	Jun-08-17
1,2-Dichloroethane-d4	8.47E-3			87.6%		75-125	"	"	"
Toluene-d8	9.50E-3			98.2%		75-125	"	"	"
4-Bromofluorobenzene	9.60E-3			99.3%		75-125	"	"	"

CS-03 (1705003-03) Matrix: Other Sampled: May-04-17 12:35 Received: May-05-17 07:50

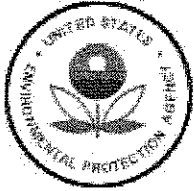
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.155	mg/L	147.81	B17F014	May-15-17	Jun-08-17
1,1-Dichloroethene	U			0.387	"	"	"	"	"
2-Butanone	U			0.773	"	"	"	"	"
Chloroform	U			0.155	"	"	"	"	"
Carbon tetrachloride	U			0.387	"	"	"	"	"
Benzene	U			0.155	"	"	"	"	"
1,2-Dichloroethane	U			0.155	"	"	"	"	"
Trichloroethene	U			0.155	"	"	"	"	"
Tetrachloroethene	U			0.387	"	"	"	"	"
Chlorobenzene	U			0.155	"	"	"	"	"
1,4-Dichlorobenzene	U			0.387	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0101			96.4%		75-125	"	"	"
1,2-Dichloroethane-d4	8.84E-3			84.5%		75-125	"	"	"
Toluene-d8	0.0105			100%		75-125	"	"	"
4-Bromofluorobenzene	0.0108			103%		75-125	"	"	"

CS-04 (1705003-04RE1) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-02-17



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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

CS-04 (1705003-04RE1) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
1,1-Dichloroethene	U			0.250	mg/L	100	B17G021	May-18-17	Jun-02-17
2-Butanone	U	J		0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Dibromofluoromethane	7.17E-3	Q		71.7%			"	"	"
1,2-Dichloroethane-d4	9.90E-3			99.0%			"	"	"
Toluene-d8	9.75E-3			97.5%			"	"	"
4-Bromofluorobenzene	9.81E-3			98.1%			"	"	"

CS-05 (1705003-05) Matrix: Other Sampled: May-04-17 13:12 Received: May-05-17 07:50
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G020	May-11-17	May-27-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"



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Project: Mid America Steel Drum, Inc.
 Project Number: MASD-05-04-17
 Project Manager: Jamie Paulin

Reported:
 Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory

CS-05 (1705003-05)

Matrix: Other

Sampled: May-04-17 13:12

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	6.57E-3	Q		65.7%		75-125	B17G020	May-11-17	May-27-17
1,2-Dichloroethane-d4	0.0100			100%		75-125	"	"	"
Toluene-d8	9.64E-3			96.4%		75-125	"	"	"
4-Bromofluorobenzene	9.57E-3			95.7%		75-125	"	"	"

CS-06 (1705003-06)

Matrix: Other

Sampled: May-04-17 13:29

Received: May-05-17 07:50

Sample Qualifiers: (SURR)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U	(IS), J		0.100	mg/L	100	B17G019	May-15-17	May-26-17
1,1-Dichloroethene	U	(IS), J		0.250	"	"	"	"	"
2-Butanone	U	(IS), J		0.500	"	"	"	"	"
Chloroform	U	(IS), J		0.100	"	"	"	"	"
Carbon tetrachloride	U	(IS), J		0.250	"	"	"	"	"
Benzene	U	(IS), J		0.100	"	"	"	"	"
1,2-Dichloroethane	U	(IS), J		0.100	"	"	"	"	"
Trichloroethene	U	(IS), J		0.100	"	"	"	"	"
Tetrachloroethene	U	J		0.250	"	"	"	"	"
Chlorobenzene	U	J		0.100	"	"	"	"	"
1,4-Dichlorobenzene	U	(IS), J		0.250	"	"	"	"	"

Surogate	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Dibromofluoromethane	1.05E-3	Q		10.5%		75-125	"	"	"
1,2-Dichloroethane-d4	2.87E-3	Q		28.7%		75-125	"	"	"
Toluene-d8	0.0104			104%		75-125	"	"	"
4-Bromofluorobenzene	7.46E-3	Q		74.6%		75-125	"	"	"

CS-07 (1705003-07)

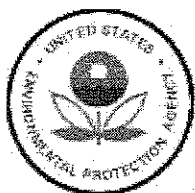
Matrix: Other

Sampled: May-04-17 13:55

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17F014	May-24-17	Jun-08-17



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

CS-07 (1705003-07) Matrix: Other Sampled: May-04-17 13:55 Received: May-05-17 07:50
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
1,1-Dichloroethene	U			0.250	mg/L	100	B17F014	May-24-17	Jun-08-17
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U			0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	0.0116	116%	75-125	"	"	"
1,2-Dichloroethane-d4	8.99E-3	89.9%	75-125	"	"	"
Toluene-d8	9.98E-3	99.8%	75-125	"	"	"
4-Bromofluorobenzene	0.0105	105%	75-125	"	"	"

CS-08 (1705003-08) Matrix: Other Sampled: May-04-17 14:15 Received: May-05-17 07:50
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17F014	May-24-17	Jun-07-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U			0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) US EPA Region 5 Chicago Regional Laboratory

CS-08 (1705003-08)

Matrix: Other

Sampled: May-04-17 14:15

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	9.40E-3			94.0%		75-125	B17F014	May-24-17	Jun-07-17
1,2-Dichloroethane-d4	9.50E-3			95.0%		75-125	"	"	"
Toluene-d8	9.47E-3			94.7%		75-125	"	"	"
4-Bromofluorobenzene	9.47E-3			94.7%		75-125	"	"	"

SFS08 (1705004-07)

Matrix: Other

Sampled: May-04-17 15:10

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-01-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	2.42	B, K		0.500	"	"	"	"	"
Chloroform	0.225			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	6.78E-3	Q		67.8%		75-125	"	"	"
1,2-Dichloroethane-d4	9.48E-3			94.8%		75-125	"	"	"
Toluene-d8	9.74E-3			97.4%		75-125	"	"	"
4-Bromofluorobenzene	0.0104			104%		75-125	"	"	"

SFS09 (1705004-08)

Matrix: Other

Sampled: May-04-17 15:23

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-01-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	4.29	B, K		0.500	"	"	"	"	"



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Chicago Regional Laboratory**

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified)
US EPA Region 5 Chicago Regional Laboratory**

SFS09 (1705004-08) Matrix: Other Sampled: May-04-17 15:23 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Chloroform	0.111			0.100	mg/L	100	B17G021	May-18-17	Jun-01-17
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	0.184			0.100	"	"	"	"	"
Tetrachloroethene	0.523			0.250	"	"	"	"	"
Chlorobenzene	0.140			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	6.75E-3	Q	67.5%	75-125	"	"	"
1,2-Dichloroethane-d4	9.66E-3		96.6%	75-125	"	"	"
Toluene-d8	9.93E-3		99.3%	75-125	"	"	"
4-Bromofluorobenzene	0.0104		104%	75-125	"	"	"

SFS10 (1705004-09) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G020	May-11-17	May-27-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U	J		0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Dibromofluoromethane	6.23E-3	Q	62.3%	75-125	"	"	"
1,2-Dichloroethane-d4	9.85E-3		98.5%	75-125	"	"	"
Toluene-d8	9.58E-3		95.8%	75-125	"	"	"



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified) US EPA Region 5 Chicago Regional Laboratory

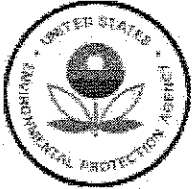
SFS10 (1705004-09) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50
Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
4-Bromofluorobenzene	9.65E-3			96.5%		75-125	B17G020	May-11-17	May-27-17

SFS10 Dup (1705004-10) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Vinyl chloride	U			0.100	mg/L	100	B17G021	May-18-17	Jun-01-17
1,1-Dichloroethene	U			0.250	"	"	"	"	"
2-Butanone	U			0.500	"	"	"	"	"
Chloroform	U			0.100	"	"	"	"	"
Carbon tetrachloride	U			0.250	"	"	"	"	"
Benzene	U			0.100	"	"	"	"	"
1,2-Dichloroethane	U			0.100	"	"	"	"	"
Trichloroethene	U			0.100	"	"	"	"	"
Tetrachloroethene	U			0.250	"	"	"	"	"
Chlorobenzene	U			0.100	"	"	"	"	"
1,4-Dichlorobenzene	U			0.250	"	"	"	"	"

Surogate	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Dibromofluoromethane	6.68E-3	Q		66.8%		75-125	"	"	"
1,2-Dichloroethane-d4	9.26E-3			92.6%		75-125	"	"	"
Toluene-d8	0.0100			100%		75-125	"	"	"
4-Bromofluorobenzene	0.0100			100%		75-125	"	"	"



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**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F006 - Volatiles

Blank (B17F006-BLK1)

Prepared: Jun-05-17 Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0112				"	1.000E-2		112%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.55E-3				"	1.000E-2		95.5%	75-125		
Surrogate: Toluene-d8	0.0100				"	1.000E-2		100%	75-125		
Surrogate: 4-Bromofluorobenzene	9.97E-3				"	1.000E-2		99.7%	75-125		

Blank (B17F006-BLK2)

Prepared: Jun-05-17 Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						



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**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F006 - Volatiles

Blank (B17F006-BLK2)				Prepared: Jun-05-17 Analyzed: Jun-06-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Trichloroethene	U			1.00E-3	mg/L						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0122				"	1.000E-2		122%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0100				"	1.000E-2		100%	75-125		
Surrogate: Toluene-d8	9.81E-3				"	1.000E-2		98.1%	75-125		
Surrogate: 4-Bromofluorobenzene	9.67E-3				"	1.000E-2		96.7%	75-125		

LCS (B17F006-BS1)				Prepared: Jun-05-17 Analyzed: Jun-06-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0266			1.00E-3	mg/L	2.500E-2		106%	75-125		
1,1-Dichloroethene	0.0265			2.50E-3	"	2.500E-2		106%	75-125		
2-Butanone	0.117			5.00E-3	"	0.1250		93.8%	75-125		
Chloroform	0.0264			1.00E-3	"	2.500E-2		106%	75-125		
Carbon tetrachloride	0.0282			2.50E-3	"	2.500E-2		113%	75-125		
Benzene	0.0273			1.00E-3	"	2.500E-2		109%	75-125		
1,2-Dichloroethane	0.0266			1.00E-3	"	2.500E-2		106%	75-125		
Trichloroethene	0.0260			1.00E-3	"	2.500E-2		104%	75-125		
Tetrachloroethene	0.0264			2.50E-3	"	2.500E-2		106%	75-125		
Chlorobenzene	0.0260			1.00E-3	"	2.500E-2		104%	75-125		
1,4-Dichlorobenzene	0.0243			2.50E-3	"	2.500E-2		97.2%	75-125		
Surrogate: Dibromofluoromethane	0.0108				"	1.000E-2		108%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.83E-3				"	1.000E-2		98.3%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0100				"	1.000E-2		100%	75-125		

LCS Dup (B17F006-BSD1)				Prepared: Jun-05-17 Analyzed: Jun-06-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0254			1.00E-3	mg/L	2.500E-2		102%	75-125	4.29	30



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F006 - Volatiles

LCS Dup (B17F006-BSD1)

Prepared: Jun-05-17 Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,1-Dichloroethene	0.0260			2.50E-3	mg/L	2.500E-2		104%	75-125	1.88	30
2-Butanone	0.117			5.00E-3	"	0.1250		94.0%	75-125	0.213	30
Chloroform	0.0257			1.00E-3	"	2.500E-2		103%	75-125	2.82	30
Carbon tetrachloride	0.0276			2.50E-3	"	2.500E-2		110%	75-125	2.11	30
Benzene	0.0263			1.00E-3	"	2.500E-2		105%	75-125	3.73	30
1,2-Dichloroethane	0.0256			1.00E-3	"	2.500E-2		102%	75-125	3.85	30
Trichloroethene	0.0254			1.00E-3	"	2.500E-2		102%	75-125	2.32	30
Tetrachloroethene	0.0268			2.50E-3	"	2.500E-2		107%	75-125	1.53	30
Chlorobenzene	0.0265			1.00E-3	"	2.500E-2		106%	75-125	1.96	30
1,4-Dichlorobenzene	0.0253			2.50E-3	"	2.500E-2		101%	75-125	3.98	30
Surrogate: Dibromofluoromethane	0.0106				"	1.000E-2		106%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.83E-3				"	1.000E-2		98.3%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0107				"	1.000E-2		107%	75-125		

MRL Check (B17F006-MRL1)

Prepared & Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	1.09E-3			1.00E-3	mg/L	1.000E-3		109%	70-130		
1,1-Dichloroethene	9.80E-4			2.50E-3	"	1.000E-3		98.0%	70-130		
2-Butanone	5.99E-3			5.00E-3	"	5.000E-3		120%	70-130		
Chloroform	9.84E-4			1.00E-3	"	1.000E-3		98.4%	70-130		
Carbon tetrachloride	2.60E-3	Q		2.50E-3	"	1.000E-3		260%	70-130		
Benzene	9.84E-4			1.00E-3	"	1.000E-3		98.4%	70-130		
1,2-Dichloroethane	9.60E-4			1.00E-3	"	1.000E-3		96.0%	70-130		
Trichloroethene	1.09E-3			1.00E-3	"	1.000E-3		109%	70-130		
Tetrachloroethene	1.01E-3			2.50E-3	"	1.000E-3		101%	70-130		
Chlorobenzene	1.01E-3			1.00E-3	"	1.000E-3		101%	70-130		
1,4-Dichlorobenzene	9.96E-4			2.50E-3	"	1.000E-3		99.6%	70-130		
Surrogate: Dibromofluoromethane	0.0105				"	1.000E-2		105%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.99E-3				"	1.000E-2		99.9%	75-125		



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17F006 - Volatiles

MRL Check (B17F006-MRL1)

Prepared & Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: Toluene-d8	9.98E-3				mg/L	1.000E-2		99.8%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0100				"	1.000E-2		100%	75-125		

MRL Check (B17F006-MRL2)

Prepared & Analyzed: Jun-05-17

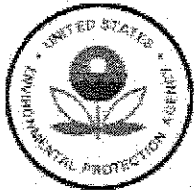
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	2.42E-3			1.00E-3	mg/L	2.500E-3		96.6%	70-130		
1,1-Dichloroethene	2.63E-3			2.50E-3	"	2.500E-3		105%	70-130		
2-Butanone	0.0129			5.00E-3	"	1.250E-2		103%	70-130		
Chloroform	2.35E-3			1.00E-3	"	2.500E-3		94.0%	70-130		
Carbon tetrachloride	2.90E-3			2.50E-3	"	2.500E-3		116%	70-130		
Benzene	2.33E-3			1.00E-3	"	2.500E-3		93.4%	70-130		
1,2-Dichloroethane	2.41E-3			1.00E-3	"	2.500E-3		96.3%	70-130		
Trichloroethene	2.28E-3			1.00E-3	"	2.500E-3		91.1%	70-130		
Tetrachloroethene	2.13E-3			2.50E-3	"	2.500E-3		85.0%	70-130		
Chlorobenzene	2.33E-3			1.00E-3	"	2.500E-3		93.0%	70-130		
1,4-Dichlorobenzene	2.44E-3			2.50E-3	"	2.500E-3		97.7%	70-130		
Surrogate: Dibromofluoromethane	9.63E-3				"	1.000E-2		96.3%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0102				"	1.000E-2		102%	75-125		
Surrogate: Toluene-d8	9.83E-3				"	1.000E-2		98.3%	75-125		
Surrogate: 4-Bromofluorobenzene	9.61E-3				"	1.000E-2		96.1%	75-125		

Batch B17F008 - Volatiles

Blank (B17F008-BLK1)

Prepared & Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312)353-8370 Fax: (312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17F008 - Volatiles

Blank (B17F008-BLK1)

Prepared & Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	U			1.00E-3	mg/L						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0104				"	1.000E-2		104%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0104				"	1.000E-2		104%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	9.85E-3				"	1.000E-2		98.5%	75-125		

Blank (B17F008-BLK2)

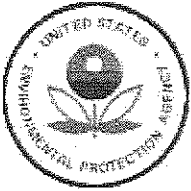
Prepared & Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0116				"	1.000E-2		116%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0101				"	1.000E-2		101%	75-125		
Surrogate: Toluene-d8	9.95E-3				"	1.000E-2		99.5%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0100				"	1.000E-2		100%	75-125		

LCS (B17F008-BS1)

Prepared & Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F008 - Volatiles

LCS (B17F008-BS1)

Prepared & Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0248			1.00E-3	mg/L	2.500E-2		99.0%	75-125		
1,1-Dichloroethene	0.0239			2.50E-3	"	2.500E-2		95.6%	75-125		
2-Butanone	0.129			5.00E-3	"	0.1250		103%	75-125		
Chloroform	0.0252			1.00E-3	"	2.500E-2		101%	75-125		
Carbon tetrachloride	0.0274			2.50E-3	"	2.500E-2		109%	75-125		
Benzene	0.0251			1.00E-3	"	2.500E-2		100%	75-125		
1,2-Dichloroethane	0.0253			1.00E-3	"	2.500E-2		101%	75-125		
Trichloroethene	0.0252			1.00E-3	"	2.500E-2		101%	75-125		
Tetrachloroethene	0.0265			2.50E-3	"	2.500E-2		106%	75-125		
Chlorobenzene	0.0252			1.00E-3	"	2.500E-2		101%	75-125		
1,4-Dichlorobenzene	0.0263			2.50E-3	"	2.500E-2		105%	75-125		
Surrogate: Dibromofluoromethane	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0100				"	1.000E-2		100%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0100				"	1.000E-2		100%	75-125		

LCS Dup (B17F008-BS1)

Prepared: Jun-06-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0249			1.00E-3	mg/L	2.500E-2		99.5%	75-125	0.532	30
1,1-Dichloroethene	0.0234			2.50E-3	"	2.500E-2		93.4%	75-125	2.34	30
2-Butanone	0.111			5.00E-3	"	0.1250		88.4%	75-125	15.5	30
Chloroform	0.0244			1.00E-3	"	2.500E-2		97.5%	75-125	3.17	30
Carbon tetrachloride	0.0263			2.50E-3	"	2.500E-2		105%	75-125	4.06	30
Benzene	0.0252			1.00E-3	"	2.500E-2		101%	75-125	0.525	30
1,2-Dichloroethane	0.0245			1.00E-3	"	2.500E-2		98.0%	75-125	3.14	30
Trichloroethene	0.0255			1.00E-3	"	2.500E-2		102%	75-125	1.14	30
Tetrachloroethene	0.0252			2.50E-3	"	2.500E-2		101%	75-125	5.24	30
Chlorobenzene	0.0250			1.00E-3	"	2.500E-2		100%	75-125	0.843	30
1,4-Dichlorobenzene	0.0242			2.50E-3	"	2.500E-2		96.6%	75-125	8.41	30
Surrogate: Dibromofluoromethane	9.19E-3				"	1.000E-2		91.9%	75-125		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B17F008 - Volatiles

LCS Dup (B17F008-BSD1)

Prepared: Jun-06-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	9.46E-3				mg/L	1.000E-2		94.6%	75-125		
Surrogate: Toluene-d8	0.0100				"	1.000E-2		100%	75-125		
Surrogate: 4-Bromofluorobenzene	9.89E-3				"	1.000E-2		98.9%	75-125		

Matrix Spike (B17F008-MS1)

Source: 1705002-06RE1

Prepared: Jun-06-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0243			1.00E-3	mg/L	2.500E-2	U	97.1%	75-125		
1,1-Dichloroethene	0.0250			2.50E-3	"	2.500E-2	U	99.8%	75-125		
2-Butanone	0.167			5.00E-3	"	0.1250	0.0570	88.3%	75-125		
Chloroform	0.0241			1.00E-3	"	2.500E-2	U	96.3%	75-125		
Carbon tetrachloride	0.0244			2.50E-3	"	2.500E-2	U	97.5%	75-125		
Benzene	0.0243			1.00E-3	"	2.500E-2	U	97.1%	75-125		
1,2-Dichloroethane	0.0238			1.00E-3	"	2.500E-2	U	95.1%	75-125		
Trichloroethene	0.0241			1.00E-3	"	2.500E-2	U	96.4%	75-125		
Tetrachloroethene	0.0253			2.50E-3	"	2.500E-2	U	101%	75-125		
Chlorobenzene	0.0246			1.00E-3	"	2.500E-2	U	98.3%	75-125		
1,4-Dichlorobenzene	0.0235			2.50E-3	"	2.500E-2	U	94.0%	75-125		
Surrogate: Dibromofluoromethane	0.0105				"	1.000E-2		105%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.55E-3				"	1.000E-2		95.5%	75-125		
Surrogate: Toluene-d8	9.80E-3				"	1.000E-2		98.0%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0103				"	1.000E-2		103%	75-125		

Matrix Spike Dup (B17F008-MSD1)

Source: 1705002-06RE1

Prepared: Jun-06-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0263			1.00E-3	mg/L	2.500E-2	U	105%	75-125	7.91	30
1,1-Dichloroethene	0.0258			2.50E-3	"	2.500E-2	U	103%	75-125	3.21	30
2-Butanone	0.178			5.00E-3	"	0.1250	0.0570	96.7%	75-125	6.12	30
Chloroform	0.0257			1.00E-3	"	2.500E-2	U	103%	75-125	6.55	30
Carbon tetrachloride	0.0278			2.50E-3	"	2.500E-2	U	111%	75-125	13.3	30
Benzene	0.0259			1.00E-3	"	2.500E-2	U	104%	75-125	6.51	30



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F008 - Volatiles

Matrix Spike Dup (B17F008-MSD1)

Source: 1705002-06RE1

Prepared: Jun-06-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	0.0254			1.00E-3	mg/L	2.500E-2	U	101%	75-125	6.41	30
Trichloroethene	0.0254			1.00E-3	"	2.500E-2	U	101%	75-125	5.07	30
Tetrachloroethene	0.0263			2.50E-3	"	2.500E-2	U	105%	75-125	3.88	30
Chlorobenzene	0.0255			1.00E-3	"	2.500E-2	U	102%	75-125	3.57	30
1,4-Dichlorobenzene	0.0254			2.50E-3	"	2.500E-2	U	102%	75-125	7.79	30
Surrogate: Dibromofluoromethane	0.0110				"	1.000E-2		110%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.42E-3				"	1.000E-2		94.2%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

Batch B17F014 - Volatiles

Blank (B17F014-BLK1)

Prepared & Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	9.39E-3				"	1.000E-2		93.9%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0102				"	1.000E-2		102%	75-125		
Surrogate: Toluene-d8	9.66E-3				"	1.000E-2		96.6%	75-125		
Surrogate: 4-Bromofluorobenzene	9.76E-3				"	1.000E-2		97.6%	75-125		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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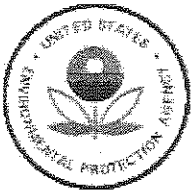
RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17F014 - Volatiles

Blank (B17F014-BLK2)		Prepared: May-15-17 Analyzed: Jun-07-17							Qualifiers: (H)		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0120				"	1.000E-2		120%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.91E-3				"	1.000E-2		99.1%	75-125		
Surrogate: Toluene-d8	9.60E-3				"	1.000E-2		96.0%	75-125		
Surrogate: 4-Bromofluorobenzene	9.95E-3				"	1.000E-2		99.5%	75-125		

Blank (B17F014-BLK3)		Prepared: May-19-17 Analyzed: Jun-07-17							Qualifiers: (H)		
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	9.95E-3	(CCV), K, Q		5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0121				"	1.000E-2		121%	75-125		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
 77 West Jackson Boulevard
 Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
 Project Number: MASD-05-04-17
 Project Manager: Jamie Paulin

Reported:
 Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B17F014 - Volatiles

Blank (B17F014-BLK3)		Prepared: May-19-17 Analyzed: Jun-07-17								Qualifiers: (H)	
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	0.0102				mg/L	1.000E-2		102%	75-125		
Surrogate: Toluene-d8	9.84E-3				"	1.000E-2		98.4%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

Blank (B17F014-BLK4)		Prepared: May-24-17 Analyzed: Jun-07-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0110				"	1.000E-2		110%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0102				"	1.000E-2		102%	75-125		
Surrogate: Toluene-d8	9.75E-3				"	1.000E-2		97.5%	75-125		
Surrogate: 4-Bromofluorobenzene	9.83E-3				"	1.000E-2		98.3%	75-125		

Blank (B17F014-BLK5)		Prepared: May-25-17 Analyzed: Jun-07-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F014 - Volatiles

Blank (B17F014-BLK5)

Prepared: May-25-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	U			1.00E-3	mg/L						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0121				"	1.000E-2		121%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0101				"	1.000E-2		101%	75-125		
Surrogate: Toluene-d8	9.77E-3				"	1.000E-2		97.7%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

Blank (B17F014-BLK6)

Prepared: Jun-02-17 Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0106				"	1.000E-2		106%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.80E-3				"	1.000E-2		98.0%	75-125		
Surrogate: Toluene-d8	9.84E-3				"	1.000E-2		98.4%	75-125		
Surrogate: 4-Bromofluorobenzene	9.61E-3				"	1.000E-2		96.1%	75-125		

Blank (B17F014-BLK7)

Prepared & Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

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77 West Jackson Boulevard
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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F014 - Volatiles

Blank (B17F014-BLK7)

Prepared & Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	0.0108				"	1.000E-2		108%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0101				"	1.000E-2		101%	75-125		
Surrogate: Toluene-d8	9.88E-3				"	1.000E-2		98.8%	75-125		
Surrogate: 4-Bromofluorobenzene	9.94E-3				"	1.000E-2		99.4%	75-125		

LCS (B17F014-BS1)

Prepared & Analyzed: Jun-07-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0248			1.00E-3	mg/L	2.500E-2		99.1%	75-125		
1,1-Dichloroethene	0.0239			2.50E-3	"	2.500E-2		95.5%	75-125		
2-Butanone	0.149			5.00E-3	"	0.1250		119%	75-125		
Chloroform	0.0255			1.00E-3	"	2.500E-2		102%	75-125		
Carbon tetrachloride	0.0281			2.50E-3	"	2.500E-2		112%	75-125		
Benzene	0.0255			1.00E-3	"	2.500E-2		102%	75-125		
1,2-Dichloroethane	0.0257			1.00E-3	"	2.500E-2		103%	75-125		
Trichloroethene	0.0266			1.00E-3	"	2.500E-2		106%	75-125		
Tetrachloroethene	0.0282			2.50E-3	"	2.500E-2		113%	75-125		
Chlorobenzene	0.0254			1.00E-3	"	2.500E-2		101%	75-125		
1,4-Dichlorobenzene	0.0254			2.50E-3	"	2.500E-2		102%	75-125		
Surrogate: Dibromofluoromethane	9.91E-3				"	1.000E-2		99.1%	75-125		



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F014 - Volatiles

LCS (B17F014-BS1)		Prepared & Analyzed: Jun-07-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	9.97E-3				mg/L	1.000E-2		99.7%	75-125		
Surrogate: Toluene-d8	9.87E-3				"	1.000E-2		98.7%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0103				"	1.000E-2		103%	75-125		

LCS Dup (B17F014-BSD1)		Prepared: Jun-07-17 Analyzed: Jun-08-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0225			1.00E-3	mg/L	2.500E-2		89.8%	75-125	9.81	30
1,1-Dichloroethene	0.0236			2.50E-3	"	2.500E-2		94.3%	75-125	1.22	30
2-Butanone	0.162	Q		5.00E-3	"	0.1250		130%	75-125	8.44	30
Chloroform	0.0231			1.00E-3	"	2.500E-2		92.3%	75-125	9.97	30
Carbon tetrachloride	0.0232			2.50E-3	"	2.500E-2		92.9%	75-125	19.1	30
Benzene	0.0243			1.00E-3	"	2.500E-2		97.2%	75-125	4.95	30
1,2-Dichloroethane	0.0227			1.00E-3	"	2.500E-2		90.9%	75-125	12.2	30
Trichloroethene	0.0246			1.00E-3	"	2.500E-2		98.3%	75-125	8.02	30
Tetrachloroethene	0.0257			2.50E-3	"	2.500E-2		103%	75-125	9.14	30
Chlorobenzene	0.0264			1.00E-3	"	2.500E-2		106%	75-125	4.13	30
1,4-Dichlorobenzene	0.0224			2.50E-3	"	2.500E-2		89.4%	75-125	12.7	30
Surrogate: Dibromofluoromethane	0.0115				"	1.000E-2		115%	75-125		
Surrogate: 1,2-Dichloroethane-d4	8.63E-3				"	1.000E-2		86.3%	75-125		
Surrogate: Toluene-d8	9.92E-3				"	1.000E-2		99.2%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0108				"	1.000E-2		108%	75-125		

Matrix Spike (B17F014-MS1)		Source: 1705002-09RE1		Prepared: Jun-07-17 Analyzed: Jun-08-17						Qualifiers: (SURR)	
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0238	J		9.21E-4	mg/L	2.302E-2	U	103%	75-125		
1,1-Dichloroethene	0.0225	J		2.30E-3	"	2.302E-2	U	97.6%	75-125		
2-Butanone	0.431	J		4.60E-3	"	0.1151	0.305	109%	75-125		
Chloroform	0.0199	J		9.21E-4	"	2.302E-2	U	86.4%	75-125		
Carbon tetrachloride	U	J		2.30E-3	"	2.302E-2	U	%	75-125		
Benzene	0.0777	J		9.21E-4	"	2.302E-2	0.0600	76.8%	75-125		



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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17F014 - Volatiles

Matrix Spike (B17F014-MS1)		Source: 1705002-09RE1		Prepared: Jun-07-17 Analyzed: Jun-08-17				Qualifiers: (SURR)			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	0.0207	J		9.21E-4	mg/L	2.302E-2	U	90.1%	75-125		
Trichloroethene	0.0159	J, Q		9.21E-4	"	2.302E-2	U	69.2%	75-125		
Tetrachloroethene	0.0248	J		2.30E-3	"	2.302E-2	U	108%	75-125		
Chlorobenzene	0.0181	J		9.21E-4	"	2.302E-2	U	78.6%	75-125		
1,4-Dichlorobenzene	0.0173	(IS), J		2.30E-3	"	2.302E-2	U	75.0%	75-125		
Surrogate: Dibromofluoromethane	0.0113				"	9.208E-3		123%	75-125		
Surrogate: 1,2-Dichloroethane-d4	4.97E-3	Q			"	9.208E-3		54.0%	75-125		
Surrogate: Toluene-d8	0.00	Q			"	9.208E-3		%	75-125		
Surrogate: 4-Bromofluorobenzene	6.09E-3	Q			"	9.208E-3		66.1%	75-125		

Matrix Spike Dup (B17F014-MSD1)		Source: 1705002-09RE1		Prepared: Jun-07-17 Analyzed: Jun-08-17				Qualifiers: (SURR)			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0228	J		9.16E-4	mg/L	2.289E-2	U	99.4%	75-125	4.53	30
1,1-Dichloroethene	0.0207	J		2.29E-3	"	2.289E-2	U	90.5%	75-125	8.12	30
2-Butanone	0.446	J		4.58E-3	"	0.1145	0.305	123%	75-125	3.47	30
Chloroform	0.0188	J		9.16E-4	"	2.289E-2	U	82.1%	75-125	5.62	30
Carbon tetrachloride	U	J		2.29E-3	"	2.289E-2	U	%	75-125		30
Benzene	0.0723	J, Q		9.16E-4	"	2.289E-2	0.0600	53.6%	75-125	7.21	30
1,2-Dichloroethane	0.0210	J		9.16E-4	"	2.289E-2	U	91.5%	75-125	1.03	30
Trichloroethene	0.0148	J, Q		9.16E-4	"	2.289E-2	U	64.4%	75-125	7.72	30
Tetrachloroethene	0.0240	J		2.29E-3	"	2.289E-2	U	105%	75-125	3.39	30
Chlorobenzene	0.0172	J		9.16E-4	"	2.289E-2	U	75.2%	75-125	4.97	30
1,4-Dichlorobenzene	0.0157	(IS), J, Q		2.29E-3	"	2.289E-2	U	68.8%	75-125	9.14	30
Surrogate: Dibromofluoromethane	0.0109				"	9.158E-3		119%	75-125		
Surrogate: 1,2-Dichloroethane-d4	5.16E-3	Q			"	9.158E-3		56.4%	75-125		
Surrogate: Toluene-d8	0.00	Q			"	9.158E-3		%	75-125		
Surrogate: 4-Bromofluorobenzene	6.44E-3	Q			"	9.158E-3		70.3%	75-125		



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G019 - Volatiles

Blank (B17G019-BLK1)

Prepared: May-25-17 Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	9.38E-3				"	1.000E-2		93.8%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.72E-3				"	1.000E-2		97.2%	75-125		
Surrogate: Toluene-d8	9.53E-3				"	1.000E-2		95.3%	75-125		
Surrogate: 4-Bromofluorobenzene	9.34E-3				"	1.000E-2		93.4%	75-125		

Blank (B17G019-BLK2)

Prepared: May-25-17 Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			0.100	mg/L						
1,1-Dichloroethene	U			0.250	"						
2-Butanone	U			0.500	"						
Chloroform	U			0.100	"						
Carbon tetrachloride	U			0.250	"						
Benzene	U			0.100	"						
1,2-Dichloroethane	U			0.100	"						
Trichloroethene	U			0.100	"						
Tetrachloroethene	U			0.250	"						
Chlorobenzene	U			0.100	"						
1,4-Dichlorobenzene	U			0.250	"						
Surrogate: Dibromofluoromethane	6.19E-3	Q			"	1.000E-2		61.9%	75-125		



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Chicago Regional Laboratory**

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77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17G019 - Volatiles

Blank (B17G019-BLK2)

Prepared: May-25-17 Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	9.28E-3				mg/L	1.000E-2		92.8%	75-125		
Surrogate: Toluene-d8	9.65E-3				"	1.000E-2		96.5%	75-125		
Surrogate: 4-Bromofluorobenzene	9.87E-3				"	1.000E-2		98.7%	75-125		

Blank (B17G019-BLK3)

Prepared: May-25-17 Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			0.100	mg/L						
1,1-Dichloroethene	U			0.250	"						
2-Butanone	0.732	Q		0.500	"						
Chloroform	U			0.100	"						
Carbon tetrachloride	U			0.250	"						
Benzene	U			0.100	"						
1,2-Dichloroethane	U			0.100	"						
Trichloroethene	U			0.100	"						
Tetrachloroethene	U			0.250	"						
Chlorobenzene	U			0.100	"						
1,4-Dichlorobenzene	U			0.250	"						
Surrogate: Dibromofluoromethane	6.59E-3	Q			"	1.000E-2		65.9%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.83E-3				"	1.000E-2		98.3%	75-125		
Surrogate: Toluene-d8	0.0102				"	1.000E-2		102%	75-125		
Surrogate: 4-Bromofluorobenzene	9.92E-3				"	1.000E-2		99.2%	75-125		

LCS (B17G019-BS1)

Prepared & Analyzed: May-25-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0254			1.00E-3	mg/L	2.500E-2		101%	75-125		
1,1-Dichloroethene	0.0249			2.50E-3	"	2.500E-2		99.4%	75-125		
2-Butanone	0.127			5.00E-3	"	0.1250		101%	75-125		
Chloroform	0.0256			1.00E-3	"	2.500E-2		102%	75-125		
Carbon tetrachloride	0.0253			2.50E-3	"	2.500E-2		101%	75-125		
Benzene	0.0255			1.00E-3	"	2.500E-2		102%	75-125		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G019 - Volatiles

LCS (B17G019-BS1)		Prepared & Analyzed: May-25-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	0.0246			1.00E-3	mg/L	2.500E-2		98.5%	75-125		
Trichloroethene	0.0263			1.00E-3	"	2.500E-2		105%	75-125		
Tetrachloroethene	0.0246			2.50E-3	"	2.500E-2		98.4%	75-125		
Chlorobenzene	0.0248			1.00E-3	"	2.500E-2		99.1%	75-125		
1,4-Dichlorobenzene	0.0247			2.50E-3	"	2.500E-2		98.6%	75-125		
Surrogate: Dibromofluoromethane	9.75E-3				"	1.000E-2		97.5%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.80E-3				"	1.000E-2		98.0%	75-125		
Surrogate: Toluene-d8	9.93E-3				"	1.000E-2		99.3%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0100				"	1.000E-2		100%	75-125		

LCS Dup (B17G019-BS1)		Prepared: May-25-17 Analyzed: May-26-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0248			1.00E-3	mg/L	2.500E-2		99.3%	75-125	2.12	30
1,1-Dichloroethene	0.0234			2.50E-3	"	2.500E-2		93.6%	75-125	6.04	30
2-Butanone	0.104			5.00E-3	"	0.1250		83.5%	75-125	19.4	30
Chloroform	0.0213			1.00E-3	"	2.500E-2		85.3%	75-125	18.0	30
Carbon tetrachloride	0.0111	Q		2.50E-3	"	2.500E-2		44.3%	75-125	78.3	30
Benzene	0.0245			1.00E-3	"	2.500E-2		98.2%	75-125	3.93	30
1,2-Dichloroethane	0.0234			1.00E-3	"	2.500E-2		93.5%	75-125	5.24	30
Trichloroethene	0.0257			1.00E-3	"	2.500E-2		103%	75-125	2.56	30
Tetrachloroethene	0.0232			2.50E-3	"	2.500E-2		92.7%	75-125	6.00	30
Chlorobenzene	0.0243			1.00E-3	"	2.500E-2		97.3%	75-125	1.85	30
1,4-Dichlorobenzene	0.0245			2.50E-3	"	2.500E-2		97.9%	75-125	0.782	30
Surrogate: Dibromofluoromethane	6.22E-3	Q			"	1.000E-2		62.2%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.31E-3				"	1.000E-2		93.1%	75-125		
Surrogate: Toluene-d8	9.76E-3				"	1.000E-2		97.6%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0100				"	1.000E-2		100%	75-125		

MRL Check (B17G019-MRL1)		Prepared & Analyzed: May-25-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G019 - Volatiles

MRL Check (B17G019-MRL1)

Prepared & Analyzed: May-25-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	1.14E-3			1.00E-3	mg/L	1.000E-3		114%	70-130		
1,1-Dichloroethene	1.09E-3			2.50E-3	"	1.000E-3		109%	70-130		
2-Butanone	4.46E-3			5.00E-3	"	5.000E-3		89.2%	70-130		
Chloroform	8.26E-4			1.00E-3	"	1.000E-3		82.6%	70-130		
Carbon tetrachloride	1.26E-3			2.50E-3	"	1.000E-3		126%	70-130		
Benzene	8.78E-4			1.00E-3	"	1.000E-3		87.8%	70-130		
1,2-Dichloroethane	9.62E-4			1.00E-3	"	1.000E-3		96.2%	70-130		
Trichloroethene	8.56E-4			1.00E-3	"	1.000E-3		85.6%	70-130		
Tetrachloroethene	1.01E-3			2.50E-3	"	1.000E-3		101%	70-130		
Chlorobenzene	9.54E-4			1.00E-3	"	1.000E-3		95.4%	70-130		
1,4-Dichlorobenzene	9.60E-4			2.50E-3	"	1.000E-3		96.0%	70-130		
Surrogate: Dibromofluoromethane	0.0105				"	1.000E-2		105%	75-125		
Surrogate: 1,2-Dichloroethane-d4	0.0101				"	1.000E-2		101%	75-125		
Surrogate: Toluene-d8	9.83E-3				"	1.000E-2		98.3%	75-125		
Surrogate: 4-Bromofluorobenzene	9.85E-3				"	1.000E-2		98.5%	75-125		

MRL Check (B17G019-MRL2)

Prepared & Analyzed: May-25-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	2.58E-3			1.00E-3	mg/L	2.500E-3		103%	70-130		
1,1-Dichloroethene	2.65E-3			2.50E-3	"	2.500E-3		106%	70-130		
2-Butanone	0.0120			5.00E-3	"	1.250E-2		95.9%	70-130		
Chloroform	2.62E-3			1.00E-3	"	2.500E-3		105%	70-130		
Carbon tetrachloride	2.56E-3			2.50E-3	"	2.500E-3		102%	70-130		
Benzene	2.63E-3			1.00E-3	"	2.500E-3		105%	70-130		
1,2-Dichloroethane	2.54E-3			1.00E-3	"	2.500E-3		101%	70-130		
Trichloroethene	2.48E-3			1.00E-3	"	2.500E-3		99.0%	70-130		
Tetrachloroethene	2.82E-3			2.50E-3	"	2.500E-3		113%	70-130		
Chlorobenzene	2.66E-3			1.00E-3	"	2.500E-3		106%	70-130		
1,4-Dichlorobenzene	2.48E-3			2.50E-3	"	2.500E-3		99.3%	70-130		
Surrogate: Dibromofluoromethane	9.94E-3				"	1.000E-2		99.4%	75-125		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G019 - Volatiles

MRL Check (B17G019-MRL2)

Prepared & Analyzed: May-25-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	0.0103				mg/L	1.000E-2		103%	75-125		
Surrogate: Toluene-d8	9.67E-3				"	1.000E-2		96.7%	75-125		
Surrogate: 4-Bromofluorobenzene	9.59E-3				"	1.000E-2		95.9%	75-125		

Batch B17G020 - Volatiles

Blank (B17G020-BLK1)

Prepared & Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						
Surrogate: Dibromofluoromethane	6.24E-3	Q			"	1.000E-2		62.4%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.55E-3				"	1.000E-2		95.5%	75-125		
Surrogate: Toluene-d8	9.55E-3				"	1.000E-2		95.5%	75-125		
Surrogate: 4-Bromofluorobenzene	9.48E-3				"	1.000E-2		94.8%	75-125		

LCS (B17G020-BS1)

Prepared & Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0240			1.00E-3	mg/L	2.500E-2		96.2%	75-125		
1,1-Dichloroethene	0.0251			2.50E-3	"	2.500E-2		100%	75-125		
2-Butanone	0.106			5.00E-3	"	0.1250		84.7%	75-125		
Chloroform	0.0224			1.00E-3	"	2.500E-2		89.7%	75-125		
Carbon tetrachloride	0.0157	Q		2.50E-3	"	2.500E-2		62.8%	75-125		



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G020 - Volatiles

LCS (B17G020-BS1)

Prepared & Analyzed: May-26-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Benzene	0.0255			1.00E-3	mg/L	2.500E-2		102%	75-125		
1,2-Dichloroethane	0.0244			1.00E-3	"	2.500E-2		97.6%	75-125		
Trichloroethene	0.0253			1.00E-3	"	2.500E-2		101%	75-125		
Tetrachloroethene	0.0262			2.50E-3	"	2.500E-2		105%	75-125		
Chlorobenzene	0.0261			1.00E-3	"	2.500E-2		105%	75-125		
1,4-Dichlorobenzene	0.0258			2.50E-3	"	2.500E-2		103%	75-125		
Surrogate: Dibromofluoromethane	6.43E-3	Q			"	1.000E-2		64.3%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.72E-3				"	1.000E-2		97.2%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0105				"	1.000E-2		105%	75-125		

LCS (B17G020-BS2)

Prepared: May-26-17 Analyzed: May-27-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0242			1.00E-3	mg/L	2.500E-2		96.9%	75-125		
1,1-Dichloroethene	0.0269			2.50E-3	"	2.500E-2		107%	75-125		
2-Butanone	0.126			5.00E-3	"	0.1250		101%	75-125		
Chloroform	0.0196			1.00E-3	"	2.500E-2		78.2%	75-125		
Carbon tetrachloride	0.0108	Q		2.50E-3	"	2.500E-2		43.2%	75-125		
Benzene	0.0256			1.00E-3	"	2.500E-2		102%	75-125		
1,2-Dichloroethane	0.0248			1.00E-3	"	2.500E-2		99.1%	75-125		
Trichloroethene	0.0305			1.00E-3	"	2.500E-2		122%	75-125		
Tetrachloroethene	0.0242			2.50E-3	"	2.500E-2		97.0%	75-125		
Chlorobenzene	0.0263			1.00E-3	"	2.500E-2		105%	75-125		
1,4-Dichlorobenzene	0.0253			2.50E-3	"	2.500E-2		101%	75-125		
Surrogate: Dibromofluoromethane	4.37E-3	Q			"	1.000E-2		43.7%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.58E-3				"	1.000E-2		95.8%	75-125		
Surrogate: Toluene-d8	9.83E-3				"	1.000E-2		98.3%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0103				"	1.000E-2		103%	75-125		



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17G020 - Volatiles

LCS Dup (B17G020-BSD1)

Prepared: May-26-17 Analyzed: May-27-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0231			1.00E-3	mg/L	2.500E-2		92.5%	75-125	3.93	30
1,1-Dichloroethene	0.0259			2.50E-3	"	2.500E-2		103%	75-125	2.92	30
2-Butanone	0.102			5.00E-3	"	0.1250		81.7%	75-125	3.60	30
Chloroform	0.0226			1.00E-3	"	2.500E-2		90.6%	75-125	0.967	30
Carbon tetrachloride	7.68E-3	Q		2.50E-3	"	2.500E-2		30.7%	75-125	68.6	30
Benzene	0.0254			1.00E-3	"	2.500E-2		101%	75-125	0.535	30
1,2-Dichloroethane	0.0239			1.00E-3	"	2.500E-2		95.6%	75-125	2.06	30
Trichloroethene	0.0278			1.00E-3	"	2.500E-2		111%	75-125	9.17	30
Tetrachloroethene	0.0240			2.50E-3	"	2.500E-2		96.1%	75-125	8.89	30
Chlorobenzene	0.0254			1.00E-3	"	2.500E-2		102%	75-125	2.90	30
1,4-Dichlorobenzene	0.0239			2.50E-3	"	2.500E-2		95.7%	75-125	7.55	30
Surrogate: Dibromofluoromethane	6.89E-3	Q			"	1.000E-2		68.9%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.37E-3				"	1.000E-2		93.7%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0107				"	1.000E-2		107%	75-125		

Batch B17G021 - Volatiles

Blank (B17G021-BLK1)

Prepared: May-31-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			1.00E-3	mg/L						
1,1-Dichloroethene	U			2.50E-3	"						
2-Butanone	U			5.00E-3	"						
Chloroform	U			1.00E-3	"						
Carbon tetrachloride	U			2.50E-3	"						
Benzene	U			1.00E-3	"						
1,2-Dichloroethane	U			1.00E-3	"						
Trichloroethene	U			1.00E-3	"						
Tetrachloroethene	U			2.50E-3	"						
Chlorobenzene	U			1.00E-3	"						
1,4-Dichlorobenzene	U			2.50E-3	"						



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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G021 - Volatiles

Blank (B17G021-BLK1)

Prepared: May-31-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: Dibromofluoromethane	4.76E-3	Q			mg/L	1.000E-2		47.6%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.04E-3				"	1.000E-2		90.4%	75-125		
Surrogate: Toluene-d8	9.71E-3				"	1.000E-2		97.1%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0105				"	1.000E-2		105%	75-125		

Blank (B17G021-BLK2)

Prepared: May-18-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			0.100	mg/L						
1,1-Dichloroethene	U			0.250	"						
2-Butanone	U			0.500	"						
Chloroform	U			0.100	"						
Carbon tetrachloride	U			0.250	"						
Benzene	U			0.100	"						
1,2-Dichloroethane	U			0.100	"						
Trichloroethene	U			0.100	"						
Tetrachloroethene	U			0.250	"						
Chlorobenzene	U			0.100	"						
1,4-Dichlorobenzene	U			0.250	"						
Surrogate: Dibromofluoromethane	5.17E-3	Q			"	1.000E-2		51.7%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.13E-3				"	1.000E-2		91.3%	75-125		
Surrogate: Toluene-d8	9.59E-3				"	1.000E-2		95.9%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0104				"	1.000E-2		104%	75-125		

Blank (B17G021-BLK3)

Prepared: May-11-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			0.100	mg/L						
1,1-Dichloroethene	U			0.250	"						
2-Butanone	U			0.500	"						
Chloroform	U			0.100	"						
Carbon tetrachloride	U			0.250	"						



**Environmental Protection Agency Region 5
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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

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**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17G021 - Volatiles

Blank (B17G021-BLK3)

Prepared: May-11-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Benzene	U			0.100	mg/L						
1,2-Dichloroethane	U			0.100	"						
Trichloroethene	U			0.100	"						
Tetrachloroethene	U			0.250	"						
Chlorobenzene	U			0.100	"						
1,4-Dichlorobenzene	U			0.250	"						
Surrogate: Dibromofluoromethane	4.86E-3	Q			"	1.000E-2		48.6%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.89E-3				"	1.000E-2		98.9%	75-125		
Surrogate: Toluene-d8	9.91E-3				"	1.000E-2		99.1%	75-125		
Surrogate: 4-Bromofluorobenzene	9.89E-3				"	1.000E-2		98.9%	75-125		

Blank (B17G021-BLK4)

Prepared: May-25-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			0.100	mg/L						
1,1-Dichloroethene	U			0.250	"						
2-Butanone	U			0.500	"						
Chloroform	U			0.100	"						
Carbon tetrachloride	U			0.250	"						
Benzene	U			0.100	"						
1,2-Dichloroethane	U			0.100	"						
Trichloroethene	U			0.100	"						
Tetrachloroethene	U			0.250	"						
Chlorobenzene	U			0.100	"						
1,4-Dichlorobenzene	U			0.250	"						
Surrogate: Dibromofluoromethane	4.92E-3	Q			"	1.000E-2		49.2%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.74E-3				"	1.000E-2		97.4%	75-125		
Surrogate: Toluene-d8	9.79E-3				"	1.000E-2		97.9%	75-125		
Surrogate: 4-Bromofluorobenzene	9.78E-3				"	1.000E-2		97.8%	75-125		



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Project Number: MASD-05-04-17
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**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
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Batch B17G021 - Volatiles

Blank (B17G021-BLK5)

Prepared: May-24-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	U			0.100	mg/L						
1,1-Dichloroethene	U			0.250	"						
2-Butanone	U			0.500	"						
Chloroform	U			0.100	"						
Carbon tetrachloride	U			0.250	"						
Benzene	U			0.100	"						
1,2-Dichloroethane	U			0.100	"						
Trichloroethene	U			0.100	"						
Tetrachloroethene	U			0.250	"						
Chlorobenzene	U			0.100	"						
1,4-Dichlorobenzene	U			0.250	"						
Surrogate: Dibromofluoromethane	8.86E-3				"	1.000E-2		88.6%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.99E-3				"	1.000E-2		99.9%	75-125		
Surrogate: Toluene-d8	9.67E-3				"	1.000E-2		96.7%	75-125		
Surrogate: 4-Bromofluorobenzene	9.98E-3				"	1.000E-2		99.8%	75-125		

LCS (B17G021-BS1)

Prepared: May-31-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0252			1.00E-3	mg/L	2.500E-2		101%	75-125		
1,1-Dichloroethene	0.0252			2.50E-3	"	2.500E-2		101%	75-125		
2-Butanone	0.0938			5.00E-3	"	0.1250		75.1%	75-125		
Chloroform	0.0216			1.00E-3	"	2.500E-2		86.2%	75-125		
Carbon tetrachloride	0.0134	Q		2.50E-3	"	2.500E-2		53.5%	75-125		
Benzene	0.0252			1.00E-3	"	2.500E-2		101%	75-125		
1,2-Dichloroethane	0.0237			1.00E-3	"	2.500E-2		95.0%	75-125		
Trichloroethene	0.0264			1.00E-3	"	2.500E-2		106%	75-125		
Tetrachloroethene	0.0246			2.50E-3	"	2.500E-2		98.6%	75-125		
Chlorobenzene	0.0248			1.00E-3	"	2.500E-2		99.1%	75-125		
1,4-Dichlorobenzene	0.0255			2.50E-3	"	2.500E-2		102%	75-125		
Surrogate: Dibromofluoromethane	4.42E-3	Q			"	1.000E-2		44.2%	75-125		



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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RCRA, LCD, US EPA Region 5
 77 West Jackson Boulevard
 Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
 Project Number: MASD-05-04-17
 Project Manager: Jamie Paulin

Reported:
 Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B17G021 - Volatiles

LCS (B17G021-BS1)

Prepared: May-31-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	9.37E-3				mg/L	1.000E-2		93.7%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

LCS (B17G021-BS2)

Prepared: May-31-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0247			1.00E-3	mg/L	2.500E-2		98.8%	75-125		
1,1-Dichloroethene	0.0257			2.50E-3	"	2.500E-2		103%	75-125		
2-Butanone	0.105			5.00E-3	"	0.1250		84.3%	75-125		
Chloroform	0.0266			1.00E-3	"	2.500E-2		106%	75-125		
Carbon tetrachloride	0.0170	Q		2.50E-3	"	2.500E-2		67.9%	75-125		
Benzene	0.0266			1.00E-3	"	2.500E-2		106%	75-125		
1,2-Dichloroethane	0.0250			1.00E-3	"	2.500E-2		100%	75-125		
Trichloroethene	0.0284			1.00E-3	"	2.500E-2		113%	75-125		
Tetrachloroethene	0.0256			2.50E-3	"	2.500E-2		102%	75-125		
Chlorobenzene	0.0266			1.00E-3	"	2.500E-2		106%	75-125		
1,4-Dichlorobenzene	0.0260			2.50E-3	"	2.500E-2		104%	75-125		
Surrogate: Dibromofluoromethane	5.74E-3	Q			"	1.000E-2		57.4%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.66E-3				"	1.000E-2		96.6%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

LCS (B17G021-BS3)

Prepared: Jun-01-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0251			1.00E-3	mg/L	2.500E-2		101%	75-125		
1,1-Dichloroethene	0.0240			2.50E-3	"	2.500E-2		96.0%	75-125		
2-Butanone	0.0915	Q		5.00E-3	"	0.1250		73.2%	75-125		
Chloroform	0.0252			1.00E-3	"	2.500E-2		101%	75-125		
Carbon tetrachloride	0.0145	Q		2.50E-3	"	2.500E-2		58.2%	75-125		
Benzene	0.0243			1.00E-3	"	2.500E-2		97.1%	75-125		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G021 - Volatiles

LCS (B17G021-BS3)

Prepared: Jun-01-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	0.0228			1.00E-3	mg/L	2.500E-2		91.3%	75-125		
Trichloroethene	0.0286			1.00E-3	"	2.500E-2		115%	75-125		
Tetrachloroethene	0.0244			2.50E-3	"	2.500E-2		97.7%	75-125		
Chlorobenzene	0.0247			1.00E-3	"	2.500E-2		98.9%	75-125		
1,4-Dichlorobenzene	0.0238			2.50E-3	"	2.500E-2		95.2%	75-125		
Surrogate: Dibromofluoromethane	6.17E-3	Q			"	1.000E-2		61.7%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.23E-3				"	1.000E-2		92.3%	75-125		
Surrogate: Toluene-d8	0.0102				"	1.000E-2		102%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0104				"	1.000E-2		104%	75-125		

LCS Dup (B17G021-BSD1)

Prepared: May-31-17 Analyzed: Jun-01-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0243			1.00E-3	mg/L	2.500E-2		97.3%	75-125	3.45	30
1,1-Dichloroethene	0.0243			2.50E-3	"	2.500E-2		97.0%	75-125	3.63	30
2-Butanone	0.0929	Q		5.00E-3	"	0.1250		74.3%	75-125	0.968	30
Chloroform	0.0249			1.00E-3	"	2.500E-2		99.4%	75-125	14.2	30
Carbon tetrachloride	0.0149	Q		2.50E-3	"	2.500E-2		59.5%	75-125	10.7	30
Benzene	0.0249			1.00E-3	"	2.500E-2		99.8%	75-125	0.894	30
1,2-Dichloroethane	0.0235			1.00E-3	"	2.500E-2		93.8%	75-125	1.25	30
Trichloroethene	0.0262			1.00E-3	"	2.500E-2		105%	75-125	0.958	30
Tetrachloroethene	0.0239			2.50E-3	"	2.500E-2		95.6%	75-125	3.08	30
Chlorobenzene	0.0248			1.00E-3	"	2.500E-2		99.1%	75-125	0.0807	30
1,4-Dichlorobenzene	0.0251			2.50E-3	"	2.500E-2		100%	75-125	1.47	30
Surrogate: Dibromofluoromethane	5.65E-3	Q			"	1.000E-2		56.5%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.57E-3				"	1.000E-2		95.7%	75-125		
Surrogate: Toluene-d8	9.92E-3				"	1.000E-2		99.2%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0102				"	1.000E-2		102%	75-125		

LCS Dup (B17G021-BSD2)

Prepared: May-31-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G021 - Volatiles

LCS Dup (B17G021-BSD2)

Prepared: May-31-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0232			1.00E-3	mg/L	2.500E-2		92.6%	75-125	6.45	30
1,1-Dichloroethene	0.0240			2.50E-3	"	2.500E-2		96.1%	75-125	6.71	30
2-Butanone	0.0931	Q		5.00E-3	"	0.1250		74.5%	75-125	12.3	30
Chloroform	0.0252			1.00E-3	"	2.500E-2		101%	75-125	5.56	30
Carbon tetrachloride	0.0154	Q		2.50E-3	"	2.500E-2		61.6%	75-125	9.72	30
Benzene	0.0249			1.00E-3	"	2.500E-2		99.5%	75-125	6.66	30
1,2-Dichloroethane	0.0240			1.00E-3	"	2.500E-2		96.2%	75-125	4.04	30
Trichloroethene	0.0292			1.00E-3	"	2.500E-2		117%	75-125	2.96	30
Tetrachloroethene	0.0238			2.50E-3	"	2.500E-2		95.3%	75-125	7.12	30
Chlorobenzene	0.0256			1.00E-3	"	2.500E-2		102%	75-125	3.86	30
1,4-Dichlorobenzene	0.0256			2.50E-3	"	2.500E-2		102%	75-125	1.53	30
Surrogate: Dibromofluoromethane	6.43E-3	Q			"	1.000E-2		64.3%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.16E-3				"	1.000E-2		91.6%	75-125		
Surrogate: Toluene-d8	9.99E-3				"	1.000E-2		99.9%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

LCS Dup (B17G021-BSD3)

Prepared: Jun-01-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0241			1.00E-3	mg/L	2.500E-2		96.5%	75-125	4.10	30
1,1-Dichloroethene	0.0241			2.50E-3	"	2.500E-2		96.5%	75-125	0.465	30
2-Butanone	0.109			5.00E-3	"	0.1250		87.5%	75-125	17.8	30
Chloroform	0.0249			1.00E-3	"	2.500E-2		99.5%	75-125	1.43	30
Carbon tetrachloride	0.0133	Q		2.50E-3	"	2.500E-2		53.0%	75-125	9.19	30
Benzene	0.0240			1.00E-3	"	2.500E-2		95.9%	75-125	1.30	30
1,2-Dichloroethane	0.0229			1.00E-3	"	2.500E-2		91.7%	75-125	0.463	30
Trichloroethene	0.0349	Q		1.00E-3	"	2.500E-2		140%	75-125	19.8	30
Tetrachloroethene	0.0226			2.50E-3	"	2.500E-2		90.4%	75-125	7.72	30
Chlorobenzene	0.0240			1.00E-3	"	2.500E-2		95.9%	75-125	3.02	30
1,4-Dichlorobenzene	0.0246			2.50E-3	"	2.500E-2		98.6%	75-125	3.43	30
Surrogate: Dibromofluoromethane	5.03E-3	Q			"	1.000E-2		50.3%	75-125		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G021 - Volatiles

LCS Dup (B17G021-BSD3)

Prepared: Jun-01-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 1,2-Dichloroethane-d4	9.73E-3				mg/L	1.000E-2		97.3%	75-125		
Surrogate: Toluene-d8	0.0100				"	1.000E-2		100%	75-125		
Surrogate: 4-Bromofluorobenzene	9.89E-3				"	1.000E-2		98.9%	75-125		

Matrix Spike (B17G021-MS1)

Source: 1705004-10

Prepared: May-31-17 Analyzed: Jun-01-17

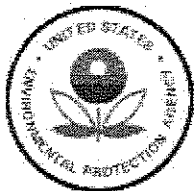
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0259			1.00E-3	mg/L	2.500E-2	U	104%	75-125		
1,1-Dichloroethene	0.0273			2.50E-3	"	2.500E-2	U	109%	75-125		
2-Butanone	0.108			5.00E-3	"	0.1250	U	86.6%	75-125		
Chloroform	0.0257			1.00E-3	"	2.500E-2	U	103%	75-125		
Carbon tetrachloride	0.0172	Q		2.50E-3	"	2.500E-2	U	68.8%	75-125		
Benzene	0.0266			1.00E-3	"	2.500E-2	U	106%	75-125		
1,2-Dichloroethane	0.0252			1.00E-3	"	2.500E-2	U	101%	75-125		
Trichloroethene	0.0269			1.00E-3	"	2.500E-2	U	108%	75-125		
Tetrachloroethene	0.0260			2.50E-3	"	2.500E-2	U	104%	75-125		
Chlorobenzene	0.0274			1.00E-3	"	2.500E-2	U	110%	75-125		
1,4-Dichlorobenzene	0.0264			2.50E-3	"	2.500E-2	U	106%	75-125		
Surrogate: Dibromofluoromethane	5.39E-3	Q			"	1.000E-2		53.9%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.60E-3				"	1.000E-2		96.0%	75-125		
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0101				"	1.000E-2		101%	75-125		

Matrix Spike (B17G021-MS2)

Source: 1705002-06RE2

Prepared: Jun-01-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0240			1.00E-3	mg/L	2.500E-2	U	96.1%	75-125		
1,1-Dichloroethene	0.0244			2.50E-3	"	2.500E-2	U	97.8%	75-125		
2-Butanone	64.1	I, Q		0.500	"	0.1250	54.7	NR	75-125		
Chloroform	0.0241			1.00E-3	"	2.500E-2	U	96.5%	75-125		
Carbon tetrachloride	0.0148	Q		2.50E-3	"	2.500E-2	U	59.4%	75-125		
Benzene	0.0233			1.00E-3	"	2.500E-2	U	93.1%	75-125		



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-27-17 15:33
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Volatiles by GC/MS, EPA 8260C (modified) - Quality Control US EPA Region 5 Chicago Regional Laboratory

Batch B17G021 - Volatiles

Matrix Spike (B17G021-MS2)		Source: 1705002-06RE2		Prepared: Jun-01-17 Analyzed: Jun-02-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
1,2-Dichloroethane	0.0218			1.00E-3	mg/L	2.500E-2	U	87.0%	75-125		
Trichloroethene	0.0247			1.00E-3	"	2.500E-2	U	99.0%	75-125		
Tetrachloroethene	0.0235			2.50E-3	"	2.500E-2	U	94.0%	75-125		
Chlorobenzene	0.0242			1.00E-3	"	2.500E-2	U	96.9%	75-125		
1,4-Dichlorobenzene	0.0230			2.50E-3	"	2.500E-2	U	91.8%	75-125		
Surrogate: Dibromofluoromethane	7.26E-3	Q			"	1.000E-2		72.6%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.04E-3				"	1.000E-2		90.4%	75-125		
Surrogate: Toluene-d8	9.72E-3				"	1.000E-2		97.2%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0103				"	1.000E-2		103%	75-125		

Matrix Spike Dup (B17G021-MSD1)		Source: 1705004-10		Prepared: May-31-17 Analyzed: Jun-01-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Vinyl chloride	0.0265	Q		1.00E-3	mg/L	2.500E-2	U	106%	75-125	2.3%	30
1,1-Dichloroethene	0.0264	Q		2.50E-3	"	2.500E-2	U	105%	75-125	3.4%	30
2-Butanone	0.105	Q		5.00E-3	"	0.1250	U	83.9%	75-125	2.8%	30
Chloroform	0.0264	Q		1.00E-3	"	2.500E-2	U	106%	75-125	2.7%	30
Carbon tetrachloride	0.0184	Q		2.50E-3	"	2.500E-2	U	73.7%	75-125	6.7%	30
Benzene	0.0270	Q		1.00E-3	"	2.500E-2	U	108%	75-125	1.5%	30
1,2-Dichloroethane	0.0251	Q		1.00E-3	"	2.500E-2	U	100%	75-125	0.4%	30
Trichloroethene	0.0273	Q		1.00E-3	"	2.500E-2	U	109%	75-125	1.5%	30
Tetrachloroethene	0.0264	Q		2.50E-3	"	2.500E-2	U	106%	75-125	1.5%	30
Chlorobenzene	0.0271	Q		1.00E-3	"	2.500E-2	U	108%	75-125	1.1%	30
1,4-Dichlorobenzene	0.0261	Q		2.50E-3	"	2.500E-2	U	104%	75-125	1.1%	30
Surrogate: Dibromofluoromethane	5.79E-3	Q			"	1.000E-2		57.9%	75-125		
Surrogate: 1,2-Dichloroethane-d4	9.41E-3				"	1.000E-2		94.1%	75-125		
Surrogate: Toluene-d8	0.0103				"	1.000E-2		103%	75-125		
Surrogate: 4-Bromofluorobenzene	0.0106				"	1.000E-2		106%	75-125		

An error in LIMS software settings in this batch caused error in calculated RPD. Corrected %RPDs calculated per MS023 Eqn 10 have been entered manually. KL 07/27/2017.

Matrix Spike Dup (B17G021-MSD2)		Source: 1705002-06RE2		Prepared: Jun-01-17 Analyzed: Jun-02-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

**Volatiles by GC/MS, EPA 8260C (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory**

Batch B17G021 - Volatiles

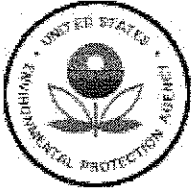
Matrix Spike Dup (B17G021-MSD2)

Source: 1705002-06RE2

Prepared: Jun-01-17 Analyzed: Jun-02-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Vinyl chloride	0.0237	Q		1.00E-3	mg/L	2.500E-2	U	94.9%	75-125	200	1.3%	30
1,1-Dichloroethene	0.0253	Q		2.50E-3	"	2.500E-2	U	101%	75-125	200	3.6%	30
2-Butanone	69.4	I, Q		0.500	"	0.1250	54.7	NR	75-125	200	7.9%	30
Chloroform	0.0240	Q		1.00E-3	"	2.500E-2	U	96.0%	75-125	200	0.4%	30
Carbon tetrachloride	0.0137	Q		2.50E-3	"	2.500E-2	U	54.7%	75-125	200	7.7%	30
Benzene	0.0236	Q		1.00E-3	"	2.500E-2	U	94.6%	75-125	200	1.3%	30
1,2-Dichloroethane	0.0216	Q		1.00E-3	"	2.500E-2	U	86.5%	75-125	200	0.9%	30
Trichloroethene	0.0255	Q		1.00E-3	"	2.500E-2	U	102%	75-125	200	3.2%	30
Tetrachloroethene	0.0229	Q		2.50E-3	"	2.500E-2	U	91.6%	75-125	200	2.6%	30
Chlorobenzene	0.0233	Q		1.00E-3	"	2.500E-2	U	93.1%	75-125	200	3.8%	30
1,4-Dichlorobenzene	0.0244	Q		2.50E-3	"	2.500E-2	U	97.5%	75-125	200	5.9%	30
Surrogate: Dibromofluoromethane	7.23E-3	Q			"	1.000E-2		72.3%	75-125			
Surrogate: 1,2-Dichloroethane-d4	9.38E-3				"	1.000E-2		93.8%	75-125			
Surrogate: Toluene-d8	0.0101				"	1.000E-2		101%	75-125			
Surrogate: 4-Bromofluorobenzene	0.0104				"	1.000E-2		104%	75-125			

An error in LIMS software settings in this batch caused error in calculated RPD. Corrected %RPDs calculated per MS023 Eqn 10 have been entered manually. KL 07/27/2017



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-27-17 15:33

Notes and Definitions

- R Rejected
- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- B Analyte concentration is < 5x that in the associated method blank(s); this concentration may be a high-bias estimate.
- (SURR) Associated surrogate recovery criteria not met for this analyte
- (MS) Matrix spike recovery criteria not met for this analyte
- (IS) Internal standard criteria not met for this analyte
- (H) Holding time exceeded for sample preparation and/or analysis; Target analyte concentrations and/or reporting limits may not be accurate
- (CCV) Continuing calibration verification criteria not met for this analyte
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 5 CHICAGO REGIONAL LABORATORY
 536 SOUTH CLARK STREET
 CHICAGO, ILLINOIS 60605



Date: 7/13/2017
Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
To: RCRA, LCD, US EPA Region 5
 77 West Jackson Boulevard
 Chicago, IL 60604
From: Greg Mitsakopoulos, Chemist
 US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X *Greg Mitsakopoulos* 7/13/17

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

Data Coordinator and Date Transmitted

Analyses included in this report:

Metals, TCLP ICP (w/o Hg)



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Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-13-17 12:07

Analysis Case Narrative

General Information

This narrative pertains to the ICP-AES analysis of TCLP samples for arsenic, barium, cadmium, chromium, lead, silver, and selenium. All holding times were met. Designated analyst Greg Mitsakopoulos may be reached at (312) 353-0377. The raw data are to be filed under work order 1705002.

<u>work order</u>	<u>TCLP ICP count *</u>	<u>received on</u>
1705002	8	5/5/17
1705003	7	""
1705004	4	""

* The count of samples that underwent analysis is shown. TCLP metals tests for a few submitted samples were cancelled based on CRL observations on sample nature with respect to feasibility of testing and with consultation with the client.

<u>process</u>	<u>SOP</u>
TCLP extraction	Gen019 v. 5 (SW-846: 1311)
sample digestion	Metals025 v. 3 (based on EPA Method 200.2)
analysis	Metals003 v. 6 (based on EPA Method 200.7 and 6010D)

Matrix spike volumes were adjusted in the electronic bench sheet record to account for the dilutions in the digestion, so recovery calculations would be correct in terms of the undiluted TCLP extract.

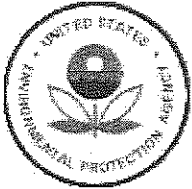
Sample Analysis and Results

The data reported herein meets the requirements referenced in the SOP(s) used for analysis and any laboratory specifications stated in the "Land and Chemicals Division Generic Quality Assurance Project Plan for Field Sampling Events at Mid-America Steel Drum, Inc.", dated April 19, 2017.

The original hard copies of the TCLP preparation are in the data package for the SVOCs.

TCLP extraction preparation

TCLP extracts were prepared by analysts D. Kleinmaier, T. Strock, A. Wroble, and this analyst. TCLP preparation was quite challenging, as some of the sample characteristics varied from powders, to viscous multiphase systems, to non-aqueous components, and from highly acidic to highly basic. Limited amounts of sample were available to a procedure that requires more, the more complex the sample.



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Most of the reported results represent the (complete) TCLP extract, since they originated from method-defined 100% solid or 100% liquid samples, or, the resultant TCLP phases were proportionally added together. But, it was not possible to leach the solids for four of the samples defined by the TCLP procedure to contain greater than 0.5% solids to undergo leaching. Thus, only first-filtrate results are reported for 1705002-03, 1705003-01, 1705003-03, and 1705003-06. Since all TCLP ICP metals were below reporting limits in the first-filtrates, no attempt was made to mathematically treat these with hypothetical dilutions of leachates. This is sound because the application of a dilution factor to a result that is below reporting limit is still a result below reporting limit.

Preservation of TCLP extracts

Four of the TCLP extracts were not preserved with acid before digestion due to one or more of the following reasons:

- * The expected amount of acid would significantly change the sample matrix
- * The sample is very basic and precipitation or violent reaction might occur
- * Field information and lab observations were such that the sample is expected to be mostly or totally non-aqueous, and thus a pH based on aqueous calibration standards does not make sense
- * The TCLP procedure and the amount of sample submitted to the lab resulted in a limited amount of extract to be shared with the entire lab; some analyses cannot use acid-preserved extracts

Per SOP Gen019, unpreserved extracts were held under refrigeration at 4 degrees C or less until digestion. Unpreserved extracts are indicated on the digestion bench sheets.

Digestion and dilutions of TCLP extracts; analysis

To maximize the effectiveness of the digestion acids and to protect the trace-level ICP instrument, TCLP extracts of field samples were accordingly processed with dilutions in the digestion.

The TCLP process resulted in extracts with a leached fraction for twelve of the samples. A twenty-fold dilution was selected, since the leaching process is in effect a dilution of the field sample. This dilution level still allows the regulatory limits of all of the TCLP ICP metals to be reported. Regulatory levels of these metals were not found.

For the remaining seven samples, the extract was a filtrate of unleached sample. This meant these were probably of a concentrated nature, yet the established digestion and analysis methods are built for aqueous environmental samples. It was anticipated based on this, along with field information and lab observations, these would be difficult to digest and analyze without harm to the instrument or analyst, and thus were digested at a dilution factor of one thousand. None of the TCLP ICP metals were found at the resultant reporting limits.

In the raw instrument data for sample 1705002-05 cadmium was more negative than the reporting limit. Since this effect was not seen in the alternate cadmium line, the "U" result will stand as-is.



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Quality Control

All quality control (QC) audits for the study analytes were within CRL's limits or did not result in qualification of the data, except for the following:

Extraction Fluid Blank: Limit = \pm method detection limit (MDL). The extraction fluid blank from 5/18/17 had 0.031 mg/L barium (MDL 0.0091 mg/L barium). Samples processed with this extraction fluid, with less than ten times the blank amount are flagged "K" for potential high bias: 1705003-04, 1705003-07, 1705004-07, and 1705004-08.

Laboratory Fortified Blank (BS): recovery limit = $100\% \pm 15\%$. Silver recovery in B17E050-BS1 was 52%. It's evident that an error was made when preparing the blank spike sample. No field samples will be flagged, as none are above the silver reporting limit, the matrix spike audits passed, and the instrument quality control audits passed.

Field Duplicates: CRL does not have audit limits for field duplication. But for information, the field samples have been compared to the audit limits for laboratory duplicates: Relative Percent Deviation (RPD) $\leq 20\%$, or an absolute difference below method detection limit (MDL), when near MDL. With respect to TCLP ICP metals above reporting limits- barium in this case- the field-identified pair 1705004-09 and 1705004-10 showed good agreement. For the field-identified pair 1705002-10 and 1705002-11, none of the TCLP ICP metals were above reporting limits.



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Project Number: MASD 05-04-17
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Reported:
Jul-13-17 12:07

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-05	1705002-05	Other	May-04-17 14:23	May-05-17 07:50
OCS-06	1705002-06	Other	May-04-17 14:37	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
OCS-10	1705002-10	Other	May-04-17 15:20	May-05-17 07:50
OCS-10 DUP	1705002-11	Other	May-04-17 15:20	May-05-17 07:50
OCS-12	1705002-13	Other	May-04-17 15:50	May-05-17 07:50
CS-01	1705003-01	Other	May-04-17 11:48	May-05-17 07:50
CS-03	1705003-03	Other	May-04-17 12:35	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50
CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50
CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-07	1705003-07	Other	May-04-17 13:55	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50
SFS09	1705004-08	Other	May-04-17 15:23	May-05-17 07:50
SFS10	1705004-09	Other	May-04-17 15:37	May-05-17 07:50
SFS10 Dup	1705004-10	Other	May-04-17 15:37	May-05-17 07:50



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-13-17 12:07
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**Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-01 (1705002-01) Matrix: Other Sampled: May-04-17 12:55 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	"

OCS-03 (1705002-03) Matrix: Other Sampled: May-04-17 13:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	"

OCS-05 (1705002-05) Matrix: Other Sampled: May-04-17 14:23 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	U			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-13-17 12:07

**Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-06 (1705002-06) Matrix: Other Sampled: May-04-17 14:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	U			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	Jun-05-17

OCS-07 (1705002-07) Matrix: Other Sampled: May-04-17 14:50 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	"

OCS-10 (1705002-10) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	U			0.060	"	"	"	"	"
Cadmium	U			0.040	"	"	"	"	"
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"



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Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-10 DUP (1705002-11) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

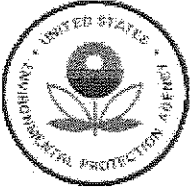
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	U			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"

OCS-12 (1705002-13) Matrix: Other Sampled: May-04-17 15:50 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	3.49			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	0.199			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"

CS-01 (1705003-01) Matrix: Other Sampled: May-04-17 11:48 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	"



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Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-13-17 12:07

**Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified)
US EPA Region 5 Chicago Regional Laboratory**

CS-03 (1705003-03) Matrix: Other Sampled: May-04-17 12:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	Jun-05-17

CS-04 (1705003-04) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	0.104	K		0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"

CS-05 (1705003-05) Matrix: Other Sampled: May-04-17 13:12 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	U			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"



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**Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified)
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CS-06 (1705003-06) Matrix: Other Sampled: May-04-17 13:29 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	"

CS-07 (1705003-07) Matrix: Other Sampled: May-04-17 13:55 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	0.302	K		0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"

CS-08 (1705003-08) Matrix: Other Sampled: May-04-17 14:15 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			40.0	mg/L	1000	B17E050	Jun-02-17	Jun-05-17
Barium	U			3.00	"	"	"	"	Jun-05-17
Cadmium	U			2.00	"	"	"	"	Jun-05-17
Chromium	U			5.00	"	"	"	"	"
Lead	U			30.0	"	"	"	"	"
Selenium	U			50.0	"	"	"	"	"
Silver	U			10.0	"	"	"	"	"



**Environmental Protection Agency Region 5
Chicago Regional Laboratory**

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-13-17 12:07

**Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified)
US EPA Region 5 Chicago Regional Laboratory**

SFS08 (1705004-07)

Matrix: Other Sampled: May-04-17 15:10 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	0.166	K		0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"

SFS09 (1705004-08)

Matrix: Other Sampled: May-04-17 15:23 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	0.073	K		0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"

SFS10 (1705004-09)

Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	1.22			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	"



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Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-13-17 12:07

Metals by ICP, TCLP Extracts using EPA 1311 & 200.7 (modified)
US EPA Region 5 Chicago Regional Laboratory

SFS10 Dup (1705004-10)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Arsenic	U			0.800	mg/L	20	B17E050	Jun-02-17	Jun-05-17
Barium	1.20			0.060	"	"	"	"	Jun-05-17
Cadmium	U			0.040	"	"	"	"	Jun-05-17
Chromium	U			0.100	"	"	"	"	"
Lead	U			0.600	"	"	"	"	"
Selenium	U			1.00	"	"	"	"	"
Silver	U			0.200	"	"	"	"	Jun-05-17



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Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

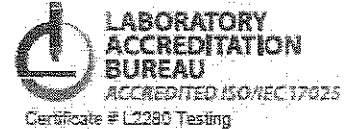
Reported:
Jul-13-17 12:07

Notes and Definitions

- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



Date: 7/20/2017
Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
To: RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604
From: Francis Awanya, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Francis A. Awanya 7/20/2017

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

Data Coordinator and Date Transmitted

Analyses included in this report:

Ignitability by Setaflash



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-20-17 16:49

Analysis Case Narrative

General Information

Samples for the above project were received at the Chicago Regional Laboratory on 5/5/2017. The samples were logged in the CRL LIMS for Ignitability by Setaflash on 5/8/2017 under Work Order Numbers 1705002, 1705003, and 1705004 respectively. Twenty-four (24) of those samples were analyzed for Ignitability by Setaflash using Standard Operating Procedure (SOP) CRL Document# AIG048A Version# 4 (Based on EPA SW-846 Method 1020B). Samples 1705002-13 (Field Sample Name OCS-12), 1705004-09 (Field Sample Name SFS10), and 1705004-10 (Field Sample Name SFS10 Dup) are solids and were not analyzed. Sample 1705002-05 (Field Sample Name OCS-05) solidified and similarly could not be analyzed. Samples 1705003-03 (Field Sample Name CS-03), 1705003-07 (Field Sample Name CS-07), and 1705004-01 (Field Sample Name SFS01) could not be analyzed for Ignitability by Setaflash because the containers were empty. The designated analyst is Francis Awanya. Francis can be reached at 312-886-3682. Other pertinent information and dates are provided in the final analysis report. Holding time does not apply to these samples.

Supporting data archived under Work Order Number: 1705002.

Sample Analysis and Results

The lowest attainable temperature was reported for samples 1705002-04 (Field Sample Name OCS-04) and 1705002-09 (Field Sample Name OCS-09). Both samples clearly flashed at the reported temperatures. But the tests could not be conducted at 9 °F lower than the reported flash temperatures because the target values were below what could be read on the instrument thermometer and the practical limit was reached.

A result is reported as No Flash (NF) when it is established that the sample is not ignitable at or below 140 °F. The data reported herein meets the requirements of the CRL analytical SOP used for analysis and the "Land and Chemicals Division Generic Quality Assurance Project Plan for Field Sampling Events" at Mid-America Drum Company, Inc. The Quality Assurance Project Plan (QAPP) is archived in the CRL share drive as "Mid America Steel Drum QAPP".

Quality Control

All required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.



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RCRA, LCD, US EPA Region 5,
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-20-17 16:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-02	1705002-02	Other	May-04-17 13:11	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-04	1705002-04	Other	May-04-17 14:10	May-05-17 07:50
OCS-06	1705002-06	Other	May-04-17 14:37	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
OCS-08	1705002-08	Other	May-04-17 15:01	May-05-17 07:50
OCS-09	1705002-09	Other	May-04-17 15:12	May-05-17 07:50
OCS-10	1705002-10	Other	May-04-17 15:20	May-05-17 07:50
OCS-10 DUP	1705002-11	Other	May-04-17 15:20	May-05-17 07:50
OCS-11	1705002-12	Other	May-04-17 15:37	May-05-17 07:50
CS-01	1705003-01	Other	May-04-17 11:48	May-05-17 07:50
CS-02	1705003-02	Other	May-04-17 12:31	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50
CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50
CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS02	1705004-02	Other	May-04-17 13:20	May-05-17 07:50
SFS03	1705004-03	Other	May-04-17 13:31	May-05-17 07:50
SFS04	1705004-04	Other	May-04-17 13:39	May-05-17 07:50
SFS06	1705004-05	Other	May-04-17 13:55	May-05-17 07:50
SFS07	1705004-06	Other	May-04-17 14:03	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50



Environmental Protection Agency Region 5
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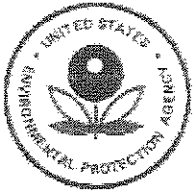
RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-20-17 16:49
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SFS09

1705004-08

Other

May-04-17 15:23 May-05-17 07:50



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312)353-8370 Fax: (312)886-2591

RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-20-17 16:49
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Ignitability, Flash Point, EPA 1020B (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-01 (1705002-01)	Matrix: Other	Sampled: May-04-17 12:55	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	72				Degrees F	1	B17E043	Jun-15-17	Jun-15-17
OCS-02 (1705002-02)				Matrix: Other	Sampled: May-04-17 13:11	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	129				Degrees F	1	B17E043	Jun-09-17	Jun-09-17
OCS-03 (1705002-03)				Matrix: Other	Sampled: May-04-17 13:35	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	115				Degrees F	1	B17E043	Jun-15-17	Jun-15-17
OCS-04 (1705002-04)				Matrix: Other	Sampled: May-04-17 14:10	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	46				Degrees F	1	B17E043	Jun-14-17	Jun-14-17
OCS-06 (1705002-06)				Matrix: Other	Sampled: May-04-17 14:37	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	No Flash				Degrees F	1	B17G013	Jul-06-17	Jul-06-17
OCS-07 (1705002-07)				Matrix: Other	Sampled: May-04-17 14:50	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	124				Degrees F	1	B17E043	Jun-15-17	Jun-15-17
OCS-08 (1705002-08)				Matrix: Other	Sampled: May-04-17 15:01	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	60				Degrees F	1	B17E043	Jun-13-17	Jun-13-17
OCS-09 (1705002-09)				Matrix: Other	Sampled: May-04-17 15:12	Received: May-05-17 07:50			
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	46				Degrees F	1	B17E043	Jun-12-17	Jun-12-17



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-20-17 16:49
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Ignitability, Flash Point, EPA 1020B (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-10 (1705002-10) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	63				Degrees F	1	B17E043	Jun-19-17	Jun-19-17

OCS-10 DUP (1705002-11) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	64				Degrees F	1	B17E043	Jun-21-17	Jun-21-17

OCS-11 (1705002-12) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	47				Degrees F	1	B17E043	Jun-14-17	Jun-14-17

CS-01 (1705003-01) Matrix: Other Sampled: May-04-17 11:48 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	No Flash				Degrees F	1	B17G013	Jul-06-17	Jul-06-17

CS-02 (1705003-02) Matrix: Other Sampled: May-04-17 12:31 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	No Flash				Degrees F	1	B17E043	Jun-12-17	Jun-12-17

CS-04 (1705003-04) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	131				Degrees F	1	B17E043	Jun-21-17	Jun-21-17

CS-05 (1705003-05) Matrix: Other Sampled: May-04-17 13:12 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	No Flash				Degrees F	1	B17E043	Jun-29-17	Jun-29-17

CS-06 (1705003-06) Matrix: Other Sampled: May-04-17 13:29 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	128				Degrees F	1	B17E043	Jun-21-17	Jun-21-17

CS-08 (1705003-08) Matrix: Other Sampled: May-04-17 14:15 Received: May-05-17 07:50



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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Phone: (312)353-8370 Fax: (312)886-2591

RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-20-17 16:49
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Ignitability, Flash Point, EPA 1020B (modified) US EPA Region 5 Chicago Regional Laboratory

Sample ID	Matrix	Sampled	Received	Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
CS-08 (1705003-08)	Other	May-04-17 14:15	May-05-17 07:50	Ignitability by Flashpoint	123				Degrees F	1	B17E043	Jun-16-17	Jun-16-17
SFS02 (1705004-02)	Other	May-04-17 13:20	May-05-17 07:50	Ignitability by Flashpoint	No Flash				Degrees F	1	B17E043	Jun-29-17	Jun-29-17
SFS03 (1705004-03)	Other	May-04-17 13:31	May-05-17 07:50	Ignitability by Flashpoint	No Flash				Degrees F	1	B17E043	Jul-05-17	Jul-05-17
SFS04 (1705004-04)	Other	May-04-17 13:39	May-05-17 07:50	Ignitability by Flashpoint	51				Degrees F	1	B17E043	Jul-05-17	Jul-05-17
SFS06 (1705004-05)	Other	May-04-17 13:55	May-05-17 07:50	Ignitability by Flashpoint	51				Degrees F	1	B17E043	Jul-05-17	Jul-05-17
SFS07 (1705004-06)	Other	May-04-17 14:03	May-05-17 07:50	Ignitability by Flashpoint	61				Degrees F	1	B17E043	Jul-05-17	Jul-05-17
SFS08 (1705004-07)	Other	May-04-17 15:10	May-05-17 07:50	Ignitability by Flashpoint	No Flash				Degrees F	1	B17G013	Jul-06-17	Jul-06-17
SFS09 (1705004-08)	Other	May-04-17 15:23	May-05-17 07:50	Ignitability by Flashpoint	No Flash				Degrees F	1	B17O013	Jul-06-17	Jul-06-17



Environmental Protection Agency Region 5 Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-20-17 16:49
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Notes and Definitions

- NF No Flash
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 5 CHICAGO REGIONAL LABORATORY
 536 SOUTH CLARK STREET
 CHICAGO, ILLINOIS 60605



Date: 7/21/2017
 Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
 To: RCRA, LCD, US EPA Region 5
 77 West Jackson Boulevard
 Chicago, IL 60604
 From: Colin Breslin, Chemist
 US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Colin Breslin 7/21/2017

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

 Data Coordinator and Date Transmitted

Analyses included in this report:

Corrosivity Corrosivity



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-21-17 13:05

Analysis Case Narrative

General Information

Samples for the analysis of Corrosivity were received at the Chicago Regional Laboratory (CRL) on May 5, 2017. The samples were assigned across three CRL work orders, which are reported together in this report. The samples met the preservation requirement upon receipt. There is no mandatory holding time defined in the reference method. The designated analyst, Colin Breslin, can be reached at 312-886-2912.

The samples were prepared and analyzed according to CRL SOP AIG003 Version #4 (based on SW-846: 9040C).

Note: Supporting data are archived with work order 1705002.

Sample Analysis and Results

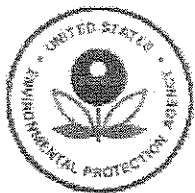
The data reported herein meets the requirements of the CRL analytical SOP used for analysis and any laboratory specifications stated in the Land and Chemicals Division, Generic Quality Assurance Project Plan, dated April 19, 2017, for the site Mid-America Steel Drum, Inc. The QAPP is saved on the CRL share drive with file name: Mid America Steel Drum QAPP.pdf.

Samples were screened for water content. When the water content did not meet the method requirements that the aqueous phase constitute at least 20% of the sample, the samples were not analyzed for Corrosivity. Water content analysis was reported separately.

Note: As of this report, additional samples still require water content screening before performing Corrosivity analysis. Additional Corrosivity results may still be reported.

Sample with CRL identification number 1705002-05 solidified and was not amenable to testing for Corrosivity.

The result for the sample with CRL identification number 1705003-08 was 13.84 pH units, and a duplicate analysis confirmed the result at 13.85 pH units. The instrument was calibrated with pH buffers at 7, 10, and 12. The calibration was confirmed with second source check standards at 7, 8, 10, 12.45, and 13 pH units. All confirmation buffers were recovered within the allowable limit of ± 0.1 pH units. The reported result was greater than the highest confirmation buffer, however, no qualifiers were applied to the final result because the instrument was shown to be in control at pH 13. Therefore, the result was reported with a high degree of confidence to have exceeded pH 13, and is considered to be accurate and precise at the reported concentration of 13.8 pH units.



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Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-21-17 13:05

Quality Control

All Quality Control (QC) audits were within CRL limits for the requested analytes or did not result in qualification of the data.

Note: The QC audit for a continuing calibration check at pH 1 (LIMS Sequence ID 17F1603-CCV2) was recorded at 1.114 pH units, which slightly exceeded the allowable limit ± 0.1 pH units at a difference of 0.114 pH units. However, the reportable precision of this SOP is to one decimal place and the QC audit passed at this level of precision. Therefore, no impact or qualifier was applied for sample with CRL LIMS ID 1705003-05, which was analyzed with this calibration check. Also, the result for 1705003-05 was 2.4 pH units and the instrument checks met all QC limits at that level.

Note: The QC audit for a continuing calibration check at pH 12.45 (LIMS Sequence ID 17F1604-CCV2) was recorded at 12.33 pH units, which slightly exceeded the allowable limit ± 0.1 pH units at a difference of 0.12 pH units. However, the reportable precision of this SOP is to one decimal place and the QC audit passed at this level of precision. Therefore, no impact or qualifier was applied for sample with CRL LIMS ID 1705004-07, which was analyzed with this calibration check. The result for 1705004-07 was 12.56 pH units and its duplicate result was 12.57 pH units. Furthermore, calibration checks at pH 13 (LIMS ID 17F1604-CCV3) were recovered within their QC limits. All other instrument checks met all QC limits. Therefore, the result for sample 1705004-07 was reported with a high degree of confidence that the result exceeds 12.5 pH units, and is considered to be accurate and precise at the reported concentration of 12.6 pH units.



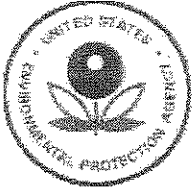
Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD 05-04-17 Project Manager: Jamie Paulin	Reported: Jul-21-17 13:05
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
CS-03	1705003-03	Other	May-04-17 12:35	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50
CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50
CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-07	1705003-07	Other	May-04-17 13:55	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50
SFS09	1705004-08	Other	May-04-17 15:23	May-05-17 07:50



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Corrosivity EPA 9040C (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-01 (1705002-01) Matrix: Other Sampled: May-04-17 12:55 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	3.6				pH Units	1	B17E038	May-22-17	May-22-17

OCS-03 (1705002-03) Matrix: Other Sampled: May-04-17 13:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	2.7				pH Units	1	B17E038	May-22-17	May-22-17

OCS-07 (1705002-07) Matrix: Other Sampled: May-04-17 14:50 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	7.0				pH Units	1	B17E038	May-22-17	May-22-17

CS-03 (1705003-03) Matrix: Other Sampled: May-04-17 12:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	6.1				pH Units	1	B17F026	Jun-16-17	Jun-16-17

CS-04 (1705003-04) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	6.2				pH Units	1	B17F026	Jun-16-17	Jun-16-17

CS-05 (1705003-05) Matrix: Other Sampled: May-04-17 13:12 Received: May-05-17 07:50

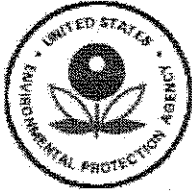
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	2.4				pH Units	1	B17F027	Jun-16-17	Jun-16-17

CS-06 (1705003-06) Matrix: Other Sampled: May-04-17 13:29 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	10.3				pH Units	1	B17F028	Jun-16-17	Jun-16-17

CS-07 (1705003-07) Matrix: Other Sampled: May-04-17 13:55 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	8.5				pH Units	1	B17F026	Jun-16-17	Jun-16-17



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Corrosivity EPA 9040C (modified) US EPA Region 5 Chicago Regional Laboratory

CS-08 (1705003-08)	Matrix: Other	Sampled: May-04-17 14:15	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	13.8				pH Units	1	B17E039	May-23-17	May-23-17

SFS08 (1705004-07)	Matrix: Other	Sampled: May-04-17 15:10	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	12.6				pH Units	1	B17F028	Jun-16-17	Jun-16-17

SFS09 (1705004-08)	Matrix: Other	Sampled: May-04-17 15:23	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
pH	10.1				pH Units	1	B17F028	Jun-16-17	Jun-16-17



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-21-17 13:05

Notes and Definitions

U Not Detected
NR Not Reported
Q QC limit Exceeded



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 CHICAGO, ILLINOIS 60605



Date: 7/25/2017
 Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
 To: RCRA, LCD, US EPA Region 5
 77 West Jackson Boulevard
 Chicago, IL 60604
 From: Colin Breslin, Chemist
 US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Colin Breslin 7/25/2017

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

 Data Coordinator and Date Transmitted

Analyses included in this report:

Water content, Karl Fisher Titration Water content, Karl Fisher Titration



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Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-25-17 07:58

Analysis Case Narrative

General Information

Samples for the analysis of Corrosivity were received at the Chicago Regional Laboratory (CRL) on May 5, 2017, which requires that samples be 20% aqueous, therefore, Water Content determination was required to supplement the Corrosivity analysis. The Corrosivity results were reported separately. The samples were assigned across three CRL work orders, which are reported together in this report. The samples met the preservation requirement upon receipt. There is no mandatory holding time defined in the reference method. The designated analyst, Colin Breslin, can be reached at 312-886-2912.

The samples were prepared and analyzed according to CRL SOP AIG015 Version #3 (based on SW-846: 9000).

Note: Supporting data are archived with work order 1705002.

Sample Analysis and Results

The data reported herein meets the requirements of the CRL analytical SOP used for analysis and any laboratory specifications stated in the Land and Chemicals Division, Generic Quality Assurance Project Plan, dated April 19, 2017, for the site Mid-America Steel Drum, Inc. The QAPP is saved on the CRL share drive with file name: Mid America Steel Drum QAPP.pdf.

Sample with CRL identification number 1705002-05 solidified and was not amenable to testing for Water Content or Corrosivity because the sample turned solid upon handling and could not be dispensed into the testing apparatus.

Due to the extremely difficult sample matrices an exceptional amount of reagent was required for Water Content determinations. Additional reagent was ordered but vendor supplies were back ordered. Addition samples still require Water Content determination and will be reported as soon as the analyses are completed. This report contains the results that have been determined so far. The following list summarizes the status of Water Content and Corrosivity analyses:



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD 05-04-17 Project Manager: Jamie Paulin	Reported: Jul-25-17 07:58
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<u>CRL LIMS ID</u>	<u>Water Content</u>	<u>Corrosivity</u>
1705002-01	> 20% aqueous	Complete
1705002-02	< 20% aqueous	Not Applicable
1705002-03	> 20% aqueous	Complete
1705002-04	< 20% aqueous	Not Applicable
1705002-05	Not Testable	Not Testable
1705002-06	< 20% aqueous	Not Applicable
1705002-07	> 20% aqueous	Complete
1705002-08	< 20% aqueous	Not Applicable
1705002-09	< 20% aqueous	Not Applicable
1705002-10	< 20% aqueous	Not Applicable
1705002-11	< 20% aqueous	Not Applicable
1705002-12	< 20% aqueous	Not Applicable
1705002-13	Not testable, solid/soil sample	
1705003-01	< 20% aqueous	Not Applicable
1705003-02	< 20% aqueous	Not Applicable
1705003-03	> 20% aqueous	Complete
1705003-04	> 20% aqueous	Complete
1705003-05	> 20% aqueous	Complete
1705003-06	> 20% aqueous	Complete
1705003-07	> 20% aqueous	Complete
1705003-08	> 20% aqueous	Complete
1705004-01	Sample evaporated at time of receipt	
1705004-02	to be tested	
1705004-03	to be tested	
1705004-04	to be tested	
1705004-05	to be tested	
1705004-06	to be tested	
1705004-07	> 20% aqueous	Complete
1705004-08	to be re-tested, > 20% aqueous but ran out of reagent before completing duplicate analysis	Complete
1705004-09	Not testable, solid/soil sample	
1705004-10	Not testable, solid/soil sample	



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Jul-25-17 07:58

Sample with CRL identification number 1705002-01 was reported to have a water content of 100.8%. Its duplicate result was 95.9% water content, which was within the quality control limit of 10% relative percent difference (RPD) at 4.98% RPD. Therefore, a result which was greater than 100% was likely due to slight variation in the balance, titrant volume dispensed, or minor fluctuation in electrode response. Any of which could contribute a slight bias in measurement error to exceed 100%. Therefore, sample 1705002-01 was considered to have nearly 100% water content, which certainly exceeds the 20% threshold for making a valid measurement of Corrosivity. The result remains reported as 100.8% water content.

Quality Control

All Quality Control (QC) audits were within CRL limits for the requested analytes or did not result in qualification of the data, except as follows:

Batch QC Duplicates:

Sample with CRL identification number 1705002-04 was reported at 0.5% water content and its duplicate result was 0.34% water content, which exceeded the QC limit of 10% relative percent difference (RPD) at 38.1% RPD. Sample results at and slightly below the reporting limit are inherently more uncertain. Therefore, the sample result for 1705002-04 was reported with a data qualifier flag as estimated. The result is considered valid that the sample result was below the 20% aqueous threshold for Corrosivity, which was not measured.

Sample with CRL identification number 1705003-05 was reported at 27.3% water content and its duplicate result was 31.9% water content, which exceeded the QC limit of 10% relative percent difference (RPD) at 15.6% RPD. Therefore, the sample result for 1705003-05 was reported with a data qualifier flag as estimated. The result is considered valid that the sample result was above the 20% aqueous threshold for Corrosivity determination.



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Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-25-17 07:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-02	1705002-02	Other	May-04-17 13:11	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-04	1705002-04	Other	May-04-17 14:10	May-05-17 07:50
OCS-06	1705002-06	Other	May-04-17 14:37	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
OCS-08	1705002-08	Other	May-04-17 15:01	May-05-17 07:50
OCS-09	1705002-09	Other	May-04-17 15:12	May-05-17 07:50
OCS-10	1705002-10	Other	May-04-17 15:20	May-05-17 07:50
OCS-10 DUP	1705002-11	Other	May-04-17 15:20	May-05-17 07:50
OCS-11	1705002-12	Other	May-04-17 15:37	May-05-17 07:50
CS-01	1705003-01	Other	May-04-17 11:48	May-05-17 07:50
CS-02	1705003-02	Other	May-04-17 12:31	May-05-17 07:50
CS-03	1705003-03	Other	May-04-17 12:35	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50
CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50
CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-07	1705003-07	Other	May-04-17 13:55	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50



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Water Content by SW846 Method 9000 US EPA Region 5 Chicago Regional Laboratory

OCS-01 (1705002-01)	Matrix: Other	Sampled: May-04-17 12:55	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	100.8			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

OCS-02 (1705002-02)	Matrix: Other	Sampled: May-04-17 13:11	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	U			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

OCS-03 (1705002-03)	Matrix: Other	Sampled: May-04-17 13:35	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	62.1			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

OCS-04 (1705002-04)	Matrix: Other	Sampled: May-04-17 14:10	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	0.5	J		0.5	%	1	B17F023	Jun-14-17	Jun-14-17

OCS-06 (1705002-06)	Matrix: Other	Sampled: May-04-17 14:37	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	U			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

OCS-07 (1705002-07)	Matrix: Other	Sampled: May-04-17 14:50	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	99.0			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

OCS-08 (1705002-08)	Matrix: Other	Sampled: May-04-17 15:01	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	13.7			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

OCS-09 (1705002-09)	Matrix: Other	Sampled: May-04-17 15:12	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	2.4			0.5	%	1	B17F023	Jun-14-17	Jun-14-17



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Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
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Water Content by SW846 Method 9000 US EPA Region 5 Chicago Regional Laboratory

OCS-10 (1705002-10) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	U			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

OCS-10 DUP (1705002-11) Matrix: Other Sampled: May-04-17 15:20 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	U			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

OCS-11 (1705002-12) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	8.6			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

CS-01 (1705003-01) Matrix: Other Sampled: May-04-17 11:48 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	18.4			0.5	%	1	B17F024	Jun-15-17	Jun-15-17

CS-02 (1705003-02) Matrix: Other Sampled: May-04-17 12:31 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	U			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

CS-03 (1705003-03) Matrix: Other Sampled: May-04-17 12:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	38.8			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

CS-04 (1705003-04) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	54.2			0.5	%	1	B17F023	Jun-14-17	Jun-14-17

CS-05 (1705003-05) Matrix: Other Sampled: May-04-17 13:12 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	27.3	J		0.5	%	1	B17F024	Jun-15-17	Jun-15-17

CS-06 (1705003-06) Matrix: Other Sampled: May-04-17 13:29 Received: May-05-17 07:50



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**Water Content by SW846 Method 9000
US EPA Region 5 Chicago Regional Laboratory**

CS-06 (1705003-06)	Matrix: Other	Sampled: May-04-17 13:29	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	92.8			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

CS-07 (1705003-07)	Matrix: Other	Sampled: May-04-17 13:55	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	97.7			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

CS-08 (1705003-08)	Matrix: Other	Sampled: May-04-17 14:15	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	93.8			0.5	%	1	B17F015	Jun-13-17	Jun-13-17

SFS08 (1705004-07)	Matrix: Other	Sampled: May-04-17 15:10	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Water content	87.1			0.5	%	1	B17F015	Jun-13-17	Jun-13-17



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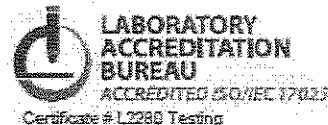
Reported:
Jul-25-17 07:58

Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



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 REGION 5 CHICAGO REGIONAL LABORATORY
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 CHICAGO, ILLINOIS 60605

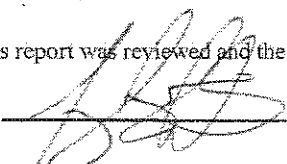


Date: 7/21/2017
 Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
 To: RCRA, LCD, US EPA Region 5
 77 West Jackson Boulevard
 Chicago, IL 60604
 From: Troy Stroock, Chemist
 US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X

 7/21/17

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

 Data Coordinator and Date Transmitted

Analyses included in this report:

SVOA solvent dilution SVOA water by micro-extraction



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Chicago Regional Laboratory

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RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-21-17 12:11

ANALYSIS CASE NARRATIVE

Analyst Phone number: 312.353.8363

General Information

25 waste samples were received on 5/05/2017 for preparation by the toxicity characteristic leaching procedure (TCLP) and analysis of TCLP extracts for semivolatile organic chemicals. The designated analyst for these samples was Troy Strock, and he can be reached at (312) 353-8362. Method 1311 provides holding times from sample collection to TCLP preparation and from TCLP preparation to extraction for semivolatile organics in order to demonstrate a waste is non-hazardous, and these holding times were not met for some of the field samples. Data for samples prepared past these method-defined holding times cannot be used to demonstrate samples are non-hazardous, but any TCLP extract concentrations exceeding the regulatory limits may be used to demonstrate samples are hazardous. Refer to the 'quality controls' section below for more details.

Samples were prepared using Chicago Regional Laboratory (CRL) Standard Operating Procedure (SOP) GEN019 V5 (based on SW-846 Method 1311). Most TCLP extracts were prepared by equilibrium liquid-liquid extraction SOP MS026 V2 (based on SW-846 reference methods 3511 and 8270D). TCLP extracts (or fractions thereof) that were immiscible with water or were otherwise very viscous were prepared by solvent dilution. The solvent dilution procedure (based on SW-846 reference method 3580A) is not included in MS026 V2, but the procedure used is summarized in pen and ink change #10389, which is included in the data package. TCLP extracts were analyzed for the subset of semivolatile organic chemicals listed in 40 CFR Part 261.24, and the data were evaluated against the action levels listed there. Data review was performed according to the guidelines described in CRL SOP GEN010 Version 2.

Supporting data for work orders 1705003 and 1705004 can be found in the folder for work order 1705002.

Sample Analysis and Results

TCLP extracts that were not miscible with water (laboratory sample IDs 1705002-02, -08, -09, 1705003-02, and 1st filtrates of 1705002-04 and -12) or were very viscous (laboratory sample IDs 1705003-01 and -03) were prepared by solvent dilution in batch B17F036. The rest of the TCLP extracts were prepared by equilibrium liquid-liquid extraction in batches B17E048 and B17E049.

None of the semivolatile organic TCLP target analytes were measured above the regulatory levels listed in 40 CFR Part 261.24, Table 1, in any of the samples submitted for this project.

3+4-methylphenol (synonyms: m-cresol and p-cresol, Chemical Abstracts Service numbers 108-39-4 and 106-44-5) were measured above the reporting limit (RL) in TCLP extracts of laboratory sample IDs 1705004-07,



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1705004-08, 1705004-09, and 1705004-10, but their concentrations were well below the regulatory limit. 2-methylphenol (synonym: o-cresol, Chemical Abstracts Service number 95-48-7) was present in the 1st filtrate of laboratory sample ID 1705002-08, but the concentration was just under the reporting limit of 110 mg/L assigned to this analyte by solvent dilution, which is also less than the regulatory level.

For the equilibrium liquid-liquid micro-extraction procedure, some samples are reported from dilutions due to the nature of the sample matrices tested, which raised the corresponding RLs for some target analytes to above their respective regulatory limits. For the solvent dilution procedure, RLs were on the order of 100 mg/L (nominal) for all target analytes except 3+4-methylphenol (200 mg/L) and pentachlorophenol (250-2500 mg/L), which are above the TCLP regulatory limits for many target analytes.

Results for TCLP extracts of two samples, 1705002-04 and 1705002-12, are derived from separate analysis of the 1st and 2nd filtrates, which were not miscible with one another. Results from analysis of the individual phases of these samples are reported as separate laboratory sample IDs. RLs assigned to target analytes in these two field samples are volume weighted averages of the RLs assigned for separate analysis of the individual phases. Surrogate recoveries for these samples are reported in the analytical results for the individual phases.

The data reported herein meet the requirements referenced in the SOP(s) used for sample preparation and analysis and any laboratory specifications stated in the FSAP, with exceptions noted in the quality control section below.

Quality Control

Please refer to the LIMS report for descriptive qualifiers added by analyte, which identify both the QC criteria that were not met and the expected impact on the reported data. The key at the end of the report provides a description of each qualifier code. Any target analytes or surrogates that did not meet the acceptance criteria listed in the report are also marked with a 'Q'. Below is a summary of the QC parameters that did not meet the acceptance criteria in the SOP.

Changes from the preliminary report:

This narrative was condensed and clarified with regard to:

- 1) The lack of an approved IDOC study completed for the solvent dilution preparation procedure prior to analysis of samples in preparation batch B17F036;
- 2) Reporting results for the 1st filtrate of laboratory sample ID 1705002-08 as the TCLP extract;
- 3) Non-conformances identified during TCLP preparation and analysis of TCLP extracts for semivolatiles organics, recorded as Qualtrax ID #s 10652 and 10851 and referenced in this narrative.

TCLP preparation:

Laboratory sample IDs 1705002-03, 1705002-09, 1705003-01, 1705003-02, and 1705003-03 were treated as



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100% liquid samples with regard to TCLP preparation in spite of having dry solids contents $> 0.5\%$. These samples filtered readily and were clear single-phase liquids, and no particulates remained on the filters from these samples after filtration, so extraction fluid determination could not be performed on these samples, which is required by the reference method prior to leaching the solid fraction.

Laboratory sample ID 1705002-08 was a viscous single-phase opaque liquid that filtered very slowly, and although the solids content was low, it was still $> 0.5\%$ dry solids. Any solids remaining on the filter were incorporated in the pores of the filter and could not be separated from the filter material. Since 5 g of solids was not obtained during liquid-solid separation to use for the extraction fluid determination step in SW-846 Method 1311, the solid fraction of this sample could not be leached.

Laboratory sample ID 1705003-06 was a viscous single-phase opaque liquid that clogged the filter during liquid/solid separation step of TCLP preparation after about 50% of the initial sample passed through the filter and therefore generated a solid fraction. However, the solid fraction remaining in the filtration apparatus was a liquid that was difficult to quantitatively transfer from the filtration apparatus to a leaching vessel. Since the 1st filtrate of this sample contained no identifiable semivolatile organic TCLP target analytes, there was no indication that leaching and analysis of the solid fraction of this sample would have produced a regulatory exceedance.

Holding times:

According to SW-846 Method 1311, data generated from samples that exceeded holding times from sample collection to TCLP extraction (14 days for semivolatile organics) or TCLP extraction to preparative extraction (7 days for semivolatile organics) cannot be used to demonstrate a material is non-hazardous. All samples that exceeded these holding times are qualified in the report. Holding time exceedances are documented in a non-conformance report, Qualtrax ID # 10851.

Instrument performance check:

For samples preceded by an instrument performance check with a pentachlorophenol tailing factor >2 , the pentachlorophenol RL was raised in the samples to the CCV concentration, at which level it was qualitatively identifiable in both CCVs bracketing the samples. An additional qualifier is added for pentachlorophenol when it did not meet the CCV criteria. All other acidic and basic target analytes were qualitatively identifiable and were within $\pm 30\%$ of their expected concentrations in a standard analyzed at the (nominal) RL in the same 12-hour interval except in one case for 2,4,6-trichlorophenol (measured concentration was 30.4% low). The 2,4,6-trichlorophenol RL was qualified in samples that referenced the preceding instrument performance check.

Continuing calibration verification (CCV):

Target analytes are qualified in samples if they were bracketed by a CCV that did not meet the SOP acceptance criteria. Pentachlorophenol data was qualified frequently in samples for this project due to not meeting the CCV criteria.



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Chromatographic resolution of structural isomers:

3- and 4-methylphenol are not chromatographically separable under the conditions used for this analysis, so they are reported as a combination of these coeluting isomers. In the matrix spike QC samples B17F036-MS3 and -MSD3, 2,4,6-trichlorophenol and 2,4,5-trichlorophenol were not chromatographically separable and appeared as one chromatographic peak.

Internal standards:

Target analytes are qualified in samples when their associated internal standards were not within 50-200% of the preceding mid-point initial calibration standard or CCV standard (whichever was analyzed more recently).

Reporting limit (RL) verification and blank spike (LCS) batch QC samples:

Target analytes that were qualitatively identifiable but were not recovered within the acceptance range at the (nominal) target analyte RL or in the LCS are qualified in all samples in the preparation batch.

NOTE: An initial demonstration of capability study has not been completed for the solvent dilution preparation procedure, which is how the laboratory establishes default target analyte RLs for a preparation and analysis procedure. In preparation batch B17F036, all target analytes except pentachlorophenol were qualitatively identifiable and recovered acceptably in the RL verification QC sample B17F036-MRL2 (prepared at 50 ug/L nominal concentration). Pentachlorophenol was qualitatively identifiable in the LCS samples in this batch (B17F036-BS1 and -BSD1, prepared at a nominal concentration of 250 ug/L), but recovery was below the lower control limit of 70% listed in pen and ink change 10389. The nominal RL assigned to pentachlorophenol in the field samples in this preparation batch was set to 250 ug/L except when the pentachlorophenol tailing factor criteria was not met in the instrument performance check, in which case the nominal RL was set to 2500 ug/L (equivalent to the CCV level).

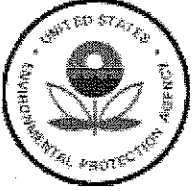
Matrix spike QC samples:

Target analytes are qualified in source samples when they are not recovered within their compound-specific acceptance ranges, unless their recoveries are above the upper control limit and they are not found in the source sample.

NOTE: Pentachlorophenol was not recovered in matrix spikes of laboratory sample ID 1705002-05 (reported as B17E049-MS1/MSD1) or 1705003-01 (reported as B17F036-MS3/MSD3), and nitrobenzene was not recovered in the matrix spike of 1705002-02 (reported as B17F036-MSD1). These target analytes were not found in the source samples, so their RLs were raised to the (nominal) matrix spike level in the source samples and qualified 'rejected' to indicate they cannot be reliably reported as not present at the prepared MS/MSD concentration.

Surrogates:

Surrogate recoveries are evaluated by sample. If more than 1 of 3 acid fraction surrogates (2-fluorophenol,



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phenol-d5, and 2,4,6-tribromophenol) or neutral fraction surrogates (nitrobenzene-d5, 2-fluorobiphenyl, and terphenyl-d14) does not meet the acceptance criteria, the associated target analytes are qualified. If recovery of pyridine-d5 did not meet the acceptance criteria, the data for pyridine is qualified. If surrogate recovery is above the upper acceptance limit and none of the associated target analytes are found in the sample, no data qualifiers are added.

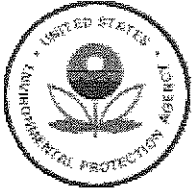
NOTE: No surrogate recoveries are reported for laboratory sample IDs 1705002-03 or 1705003-06 due to co-extracted non-target matrix interferences that prevented the extracts from being successfully analyzed at the default extract volume in the SOP.

Preparation batch B17F036 initial demonstration of capability and non-conformances:

An initial demonstration of capability (IDOC) that complies with CRL Quality Management Plan requirements has not been completed for the solvent dilution preparation procedure at the time these samples were analyzed. No non-conformance report was created, because CRL laboratory management and the project manager were made aware of this through pen and ink change #10389. Pentachlorophenol performance was variable depending on the sample, but performance of the other target analytes generally met expectations.

Surrogate recoveries in QC sample B17F036-MS3 were around a factor of 10 higher than in the field sample 1705003-01 and matrix spike duplicate B17F036-MSD3, consistent with having been spiked with ten times more of the surrogates spiking solution than the field sample or matrix spike duplicate. Target analyte recoveries in B17F036-MS3 and -MSD3 were similar, and non-target analytes in these samples were consistent between these replicates, which supported the assertion that high surrogate recovery in this QC sample was due to a preparation error. The non-conformance is documented in Qualtrax ID # 10851.

QC sample ID B17F036-MS1 is not reported due to a suspected preparation error (surrogates were recovered acceptably, but no target analytes were identified in this QC sample). This non-conformance is documented in Qualtrax ID # 10851.



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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-02	1705002-02	Other	May-04-17 13:11	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-04	1705002-04	Other	May-04-17 14:10	May-05-17 07:50
OCS-05	1705002-05	Other	May-04-17 14:23	May-05-17 07:50
OCS-06	1705002-06	Other	May-04-17 14:37	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
OCS-08	1705002-08	Other	May-04-17 15:01	May-05-17 07:50
OCS-09	1705002-09	Other	May-04-17 15:12	May-05-17 07:50
OCS-10	1705002-10	Other	May-04-17 15:20	May-05-17 07:50
OCS-10 DUP	1705002-11	Other	May-04-17 15:20	May-05-17 07:50
OCS-11	1705002-12	Other	May-04-17 15:37	May-05-17 07:50
OCS-12	1705002-13	Other	May-04-17 15:50	May-05-17 07:50
1705002-04 1st Filtrate	1705002-14	Other	May-04-17 14:10	May-05-17 07:50
1705002-04 2nd Filtrate	1705002-15	Other	May-04-17 14:10	May-05-17 07:50
1705002-12 1st Filtrate 1st Phase	1705002-18	Other	May-04-17 15:37	May-05-17 07:50
1705002-12 1st Filtrate 2nd Phase	1705002-19	Other	May-04-17 15:37	May-05-17 07:50
1705002-12 2nd Filtrate	1705002-20	Other	May-04-17 15:37	May-05-17 07:50
CS-01	1705003-01	Other	May-04-17 11:48	May-05-17 07:50
CS-02	1705003-02	Other	May-04-17 12:31	May-05-17 07:50
CS-03	1705003-03	Other	May-04-17 12:35	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50
CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50



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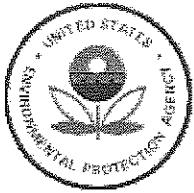
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CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-07	1705003-07	Other	May-04-17 13:55	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50
SFS09	1705004-08	Other	May-04-17 15:23	May-05-17 07:50
SFS10	1705004-09	Other	May-04-17 15:37	May-05-17 07:50
SFS10 Dup	1705004-10	Other	May-04-17 15:37	May-05-17 07:50



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**Semivolatiles by GC/MS, EPA 8270D (modified)
US EPA Region 5 Chicago Regional Laboratory**

OCS-01 (1705002-01)

Matrix: Other

Sampled: May-04-17 12:55

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E048	May-15-17	Jun-09-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	U			0.049	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.35		56.1%	20-71	"	"	"
2-Fluorophenol	0.45		72.3%	29-73	"	"	"
Phenol-d5	0.43	Q	69.2%	22-62	"	"	"
Nitrobenzene-d5	0.53		85.1%	42-90	"	"	"
2-Fluorobiphenyl	0.57		92.3%	40-93	"	"	"
2,4,6-Tribromophenol	0.63		102%	43-107	"	"	"
Terphenyl-d14	0.57		92.3%	59-111	"	"	"

OCS-02 (1705002-02)

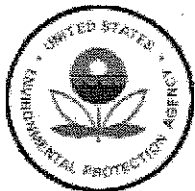
Matrix: Other

Sampled: May-04-17 13:11

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			88	mg/L	10	B17F036	Jun-08-17	Jun-11-17
2-Methylphenol	U			88	"	"	"	"	"
3+4-Methylphenol	U			180	"	"	"	"	"
Hexachloroethane	U			88	"	"	"	"	"



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Semivolatiles by GC/MS, EPA 8270D (modified) US EPA Region 5 Chicago Regional Laboratory

OCS-02 (1705002-02) Matrix: Other Sampled: May-04-17 13:11 Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrobenzene	Rejected	MI		220	mg/L	10	B17F036	Jun-08-17	Jun-11-17
Hexachlorobutadiene	U			88	"	"	"	"	"
2,4,6-Trichlorophenol	U			88	"	"	"	"	"
2,4,5-Trichlorophenol	U			88	"	"	"	"	"
2,4-Dinitrotoluene	U			88	"	"	"	"	"
Hexachlorobenzene	U			88	"	"	"	"	"
Pentachlorophenol	U	(CCV), (LCS), (MS), UJ		220	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
<i>Pyridine-d5</i>	190		88.0%	70-130	"	"	"
<i>2-Fluorophenol</i>	220		102%	70-130	"	"	"
<i>Phenol-d5</i>	230		103%	70-130	"	"	"
<i>Nitrobenzene-d5</i>	1400	MI, Q	624%	70-130	"	"	"
<i>2-Fluorobiphenyl</i>	220		98.4%	70-130	"	"	"
<i>2,4,6-Tribromophenol</i>	220		99.2%	70-130	"	"	"
<i>Terphenyl-d14</i>	210		94.8%	70-130	"	"	"

OCS-03 (1705002-03) Matrix: Other Sampled: May-04-17 13:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U	(IS), UJ		6.5	mg/L	50	B17E048	May-15-17	Jun-09-17
2-Methylphenol	U	(IS), UJ		1.2	"	"	"	"	"
3+4-Methylphenol	U	(IS), UJ		2.5	"	"	"	"	"
Hexachloroethane	U			1.2	"	"	"	"	"
Nitrobenzene	U			1.2	"	"	"	"	"
Hexachlorobutadiene	U			1.2	"	"	"	"	"
2,4,6-Trichlorophenol	U	(IS), UJ		1.2	"	"	"	"	"
2,4,5-Trichlorophenol	U	(IS), UJ		1.2	"	"	"	"	"
2,4-Dinitrotoluene	U	(IS), (RL), UJ		1.2	"	"	"	"	"
Hexachlorobenzene	U			1.2	"	"	"	"	"
Pentachlorophenol	U			1.2	"	"	"	"	"

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OCS-04 (1705002-04)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			4.3	mg/L	1	B17G006	Jul-07-17	Jul-10-17
2-Methylphenol	U			4.2	"	"	"	"	"
3+4-Methylphenol	U			8.0	"	"	"	"	"
Hexachloroethane	U			4.2	"	"	"	"	"
Nitrobenzene	U			4.2	"	"	"	"	"
Hexachlorobutadiene	U			4.2	"	"	"	"	"
2,4,6-Trichlorophenol	U			4.2	"	"	"	"	"
2,4,5-Trichlorophenol	U			4.2	"	"	"	"	"
2,4-Dinitrotoluene	U			4.2	"	"	"	"	"
Hexachlorobenzene	U			4.2	"	"	"	"	"
Pentachlorophenol	U			100	"	"	"	"	"

OCS-05 (1705002-05)

Matrix: Other

Sampled: May-04-17 14:23

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.3	mg/L	10	B17E049	May-26-17	Jun-11-17
2-Methylphenol	U			0.25	"	"	"	"	"
3+4-Methylphenol	U			0.50	"	"	"	"	"
Hexachloroethane	U			0.25	"	"	"	"	"
Nitrobenzene	U			0.25	"	"	"	"	"
Hexachlorobutadiene	U			0.25	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.25	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.25	"	"	"	"	"
2,4-Dinitrotoluene	U			0.25	"	"	"	"	"
Hexachlorobenzene	U			0.25	"	"	"	"	"
Pentachlorophenol	Rejected	(CCV), (MS)		6.2	"	"	"	"	"

Surogate	Result		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.36		57.2%	20-71	"	"
2-Fluorophenol	0.44		70.0%	29-73	"	"
Phenol-d5	0.38		60.8%	22-62	"	"
Nitrobenzene-d5	0.58	Q	93.2%	42-90	"	"
2-Fluorobiphenyl	0.56		90.0%	40-93	"	"

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OCS-05 (1705002-05)

Matrix: Other

Sampled: May-04-17 14:23

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
2,4,6-Tribromophenol	0.48			76.4%		43-107	B17E049	May-26-17	Jun-11-17
Terphenyl-d14	0.54			83.6%		59-111	"	"	"

OCS-06 (1705002-06)

Matrix: Other

Sampled: May-04-17 14:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.3	mg/L	10	B17E049	May-26-17	Jun-11-17
2-Methylphenol	U			0.24	"	"	"	"	"
3+4-Methylphenol	U			0.49	"	"	"	"	"
Hexachloroethane	U			0.24	"	"	"	"	"
Nitrobenzene	U			0.24	"	"	"	"	"
Hexachlorobutadiene	U			0.24	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.24	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.24	"	"	"	"	"
2,4-Dinitrotoluene	U			0.24	"	"	"	"	"
Hexachlorobenzene	U			0.24	"	"	"	"	"
Pentachlorophenol	U	(CCV), UJ		0.24	"	"	"	"	"

Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.21			34.8%		20-71	"	"	"
2-Fluorophenol	0.41			67.6%		29-73	"	"	"
Phenol-d5	0.36			59.6%		22-62	"	"	"
Nitrobenzene-d5	0.42			68.4%		42-90	"	"	"
2-Fluorobiphenyl	0.48			78.8%		40-93	"	"	"
2,4,6-Tribromophenol	0.43			70.8%		43-107	"	"	"
Terphenyl-d14	0.50			81.6%		59-111	"	"	"

OCS-07 (1705002-07)

Matrix: Other

Sampled: May-04-17 14:50

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E048	May-15-17	Jun-10-17

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OCS-07 (1705002-07)

Matrix: Other

Sampled: May-04-17 14:50

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Methylphenol	U			0.025	mg/L	1	B17E048	May-15-17	Jun-10-17
3+4-Methylphenol	U			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.49	Q	78.5%	20-71	"	"	"
2-Fluorophenol	0.50	Q	79.7%	29-73	"	"	"
Phenol-d5	0.42	Q	67.2%	22-62	"	"	"
Nitrobenzene-d5	0.65	Q	104%	42-90	"	"	"
2-Fluorobiphenyl	0.66	Q	106%	40-93	"	"	"
2,4,6-Tribromophenol	0.65		105%	43-107	"	"	"
Terphenyl-d14	0.65		104%	59-111	"	"	"

OCS-08 (1705002-08)

Matrix: Other

Sampled: May-04-17 15:01

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			110	mg/L	10	B17F036	Jun-08-17	Jun-11-17
2-Methylphenol	U			110	"	"	"	"	"
3+4-Methylphenol	U			210	"	"	"	"	"
Hexachloroethane	U			110	"	"	"	"	"
Nitrobenzene	U			110	"	"	"	"	"
Hexachlorobutadiene	U			110	"	"	"	"	"
2,4,6-Trichlorophenol	U			110	"	"	"	"	"
2,4,5-Trichlorophenol	U			110	"	"	"	"	"
2,4-Dinitrotoluene	U			110	"	"	"	"	"
Hexachlorobenzene	U			110	"	"	"	"	"

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OCS-08 (1705002-08)

Matrix: Other

Sampled: May-04-17 15:01

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pentachlorophenol	U	(CCV), (LCS), UJ		260	mg/L	10	B17F036	Jun-08-17	Jun-11-17

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
<i>Pyridine-d5</i>	200	77.2%	70-130	"	"	"
<i>2-Fluorophenol</i>	260	99.2%	70-130	"	"	"
<i>Phenol-d5</i>	280	105%	70-130	"	"	"
<i>Nitrobenzene-d5</i>	290	108%	70-130	"	"	"
<i>2-Fluorobiphenyl</i>	280	104%	70-130	"	"	"
<i>2,4,6-Tribromophenol</i>	330	124%	70-130	"	"	"
<i>Terphenyl-d14</i>	280	105%	70-130	"	"	"

OCS-09 (1705002-09)

Matrix: Other

Sampled: May-04-17 15:12

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			92	mg/L	10	B17F036	Jun-08-17	Jun-27-17
2-Methylphenol	U			92	"	"	"	"	"
3+4-Methylphenol	U			180	"	"	"	"	"
Hexachloroethane	U			92	"	"	"	"	"
Nitrobenzene	U			92	"	"	"	"	"
Hexachlorobutadiene	U			92	"	"	"	"	"
2,4,6-Trichlorophenol	U			92	"	"	"	"	"
2,4,5-Trichlorophenol	U			92	"	"	"	"	"
2,4-Dinitrotoluene	U			92	"	"	"	"	"
Hexachlorobenzene	U			92	"	"	"	"	"
Pentachlorophenol	U	(CCV), (LCS), (TF), UJ		2300	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
<i>Pyridine-d5</i>	190	80.8%	70-130	"	"	"
<i>2-Fluorophenol</i>	200	85.6%	70-130	"	"	"
<i>Phenol-d5</i>	190	84.0%	70-130	"	"	"
<i>Nitrobenzene-d5</i>	240	103%	70-130	"	"	"

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OCS-09 (1705002-09)

Matrix: Other

Sampled: May-04-17 15:12

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
2-Fluorobiphenyl	210			93.2%		70-130	B17F036	Jun-08-17	Jun-27-17
2,4,6-Tribromophenol	150	Q		63.6%		70-130	"	"	"
Terphenyl-d14	210			91.6%		70-130	"	"	"

OCS-10 (1705002-10)

Matrix: Other

Sampled: May-04-17 15:20

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.3	mg/L	10	B17E049	May-26-17	Jun-11-17
2-Methylphenol	U			0.25	"	"	"	"	"
3+4-Methylphenol	U			0.49	"	"	"	"	"
Hexachloroethane	U			0.25	"	"	"	"	"
Nitrobenzene	U			0.25	"	"	"	"	"
Hexachlorobutadiene	U			0.25	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.25	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.25	"	"	"	"	"
2,4-Dinitrotoluene	U			0.25	"	"	"	"	"
Hexachlorobenzene	U			0.25	"	"	"	"	"
Pentachlorophenol	U	(CCV), UJ		0.25	"	"	"	"	"

Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.30			48.0%		20-71	"	"	"
2-Fluorophenol	0.41			66.0%		29-73	"	"	"
Phenol-d5	0.37			60.4%		22-62	"	"	"
Nitrobenzene-d5	0.50			80.8%		42-90	"	"	"
2-Fluorobiphenyl	0.54			88.0%		40-93	"	"	"
2,4,6-Tribromophenol	0.52			83.6%		43-107	"	"	"
Terphenyl-d14	0.55			88.4%		59-111	"	"	"

OCS-10 DUP (1705002-11)

Matrix: Other

Sampled: May-04-17 15:20

Received: May-05-17 07:50

Sample Qualifiers: (H)

US EPA Region 5 Chicago Regional Laboratory

OCS-10 DUP (1705002-11)

Matrix: Other

Sampled: May-04-17 15:20

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.3	mg/L	10	B17E049	May-26-17	Jun-11-17
2-Methylphenol	U			0.25	"	"	"	"	"
3+4-Methylphenol	U			0.50	"	"	"	"	"
Hexachloroethane	U			0.25	"	"	"	"	"
Nitrobenzene	U			0.25	"	"	"	"	"
Hexachlorobutadiene	U			0.25	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.25	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.25	"	"	"	"	"
2,4-Dinitrotoluene	U			0.25	"	"	"	"	"
Hexachlorobenzene	U			0.25	"	"	"	"	"
Pentachlorophenol	U	(CCV), UJ		0.25	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.29		46.4%	20-71	"	"	"
2-Fluorophenol	0.40		63.6%	29-73	"	"	"
Phenol-d5	0.35		56.0%	22-62	"	"	"
Nitrobenzene-d5	0.60	Q	96.4%	42-90	"	"	"
2-Fluorobiphenyl	0.57		91.2%	40-93	"	"	"
2,4,6-Tribromophenol	0.47		74.8%	43-107	"	"	"
Terphenyl-d14	0.56		89.2%	59-111	"	"	"

OCS-11 (1705002-12)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.7	mg/L	1	B17G006	Jul-07-17	Jul-10-17
2-Methylphenol	U			1.6	"	"	"	"	"
3+4-Methylphenol	U			3.2	"	"	"	"	"
Hexachloroethane	U			1.6	"	"	"	"	"
Nitrobenzene	U			1.6	"	"	"	"	"
Hexachlorobutadiene	U			1.6	"	"	"	"	"
2,4,6-Trichlorophenol	U			1.6	"	"	"	"	"
2,4,5-Trichlorophenol	U			1.6	"	"	"	"	"
2,4-Dinitrotoluene	U			1.6	"	"	"	"	"

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OCS-11 (1705002-12)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Hexachlorobenzene	U			1.6	mg/L	1	B17G006	Jul-07-17	Jul-10-17
Pentachlorophenol	U			38	"	"	"	"	"

OCS-12 (1705002-13)

Matrix: Other

Sampled: May-04-17 15:50

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E048	May-15-17	Jun-11-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	U			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U	(CCV), (TF), UJ		0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U	(CCV), (TF), UJ		0.62	"	"	"	"	"

Surogate	Result	%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.29	46.0%	20-71	"	"	"
2-Fluorophenol	0.37	59.8%	29-73	"	"	"
Phenol-d5	0.29	46.4%	22-62	"	"	"
Nitrobenzene-d5	0.50	79.2%	42-90	"	"	"
2-Fluorobiphenyl	0.57	90.4%	40-93	"	"	"
2,4,6-Tribromophenol	0.47	(CCV), J 75.6%	43-107	"	"	"
Terphenyl-d14	0.59	94.1%	59-111	"	"	"

1705002-04 1st Filtrate (1705002-14)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			110	mg/L	10	B17F036	Jun-08-17	Jun-11-17
2-Methylphenol	U			110	"	"	"	"	"
3+4-Methylphenol	U			210	"	"	"	"	"

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1705002-04 1st Filtrate (1705002-14)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Hexachloroethane	U			110	mg/L	10	B17F036	Jun-08-17	Jun-11-17
Nitrobenzene	U			110	"	"	"	"	"
Hexachlorobutadiene	U			110	"	"	"	"	"
2,4,6-Trichlorophenol	U			110	"	"	"	"	"
2,4,5-Trichlorophenol	U			110	"	"	"	"	"
2,4-Dinitrotoluene	U			110	"	"	"	"	"
Hexachlorobenzene	U			110	"	"	"	"	"
Pentachlorophenol	U	(CCV), (LCS), UJ		270	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	280		104%	70-130	"	"	"
2-Fluorophenol	200		73.2%	70-130	"	"	"
Phenol-d5	280		103%	70-130	"	"	"
Nitrobenzene-d5	250		95.2%	70-130	"	"	"
2-Fluorobiphenyl	260		96.8%	70-130	"	"	"
2,4,6-Tribromophenol	74	Q	27.6%	70-130	"	"	"
Terphenyl-d14	260		97.6%	70-130	"	"	"

1705002-04 2nd Filtrate (1705002-15)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E049	May-26-17	Jun-10-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	U			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U			0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

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1705002-04 2nd Filtrate (1705002-15)

Matrix: Other

Sampled: May-04-17 14:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.43			69.5%		20-71	B17E049	May-26-17	Jun-10-17
2-Fluorophenol	0.47	Q		75.4%		29-73	"	"	"
Phenol-d5	0.36			57.2%		22-62	"	"	"
Nitrobenzene-d5	0.59	Q		94.8%		42-90	"	"	"
2-Fluorobiphenyl	0.62	Q		99.0%		40-93	"	"	"
2,4,6-Tribromophenol	0.53			84.8%		43-107	"	"	"
Terphenyl-d14	0.58			93.6%		59-111	"	"	"

1705002-12 1st Filtrate 1st Phase (1705002-18)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			86	mg/L	10	B17F036	Jun-08-17	Jun-12-17
2-Methylphenol	U			86	"	"	"	"	"
3+4-Methylphenol	U			170	"	"	"	"	"
Hexachloroethane	U			86	"	"	"	"	"
Nitrobenzene	U			86	"	"	"	"	"
Hexachlorobutadiene	U			86	"	"	"	"	"
2,4,6-Trichlorophenol	U			86	"	"	"	"	"
2,4,5-Trichlorophenol	U			86	"	"	"	"	"
2,4-Dinitrotoluene	U			86	"	"	"	"	"
Hexachlorobenzene	U			86	"	"	"	"	"
Pentachlorophenol	U	(LCS), UJ		220	"	"	"	"	"

Surogate	Result		MDL	%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	210			99.6%		70-130	"	"	"
2-Fluorophenol	220			104%		70-130	"	"	"
Phenol-d5	230			107%		70-130	"	"	"
Nitrobenzene-d5	190			86.8%		70-130	"	"	"
2-Fluorobiphenyl	200			92.8%		70-130	"	"	"
2,4,6-Tribromophenol	200			91.2%		70-130	"	"	"

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1705002-12 1st Filtrate 1st Phase (1705002-18)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Terphenyl-d14	210			96.4%		70-130	B17F036	Jun-08-17	Jun-12-17

1705002-12 1st Filtrate 2nd Phase (1705002-19)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			93	mg/L	10	B17F036	Jun-08-17	Jun-12-17
2-Methylphenol	U			93	"	"	"	"	"
3+4-Methylphenol	U			190	"	"	"	"	"
Hexachloroethane	U			93	"	"	"	"	"
Nitrobenzene	U			93	"	"	"	"	"
Hexachlorobutadiene	U			93	"	"	"	"	"
2,4,6-Trichlorophenol	U			93	"	"	"	"	"
2,4,5-Trichlorophenol	U			93	"	"	"	"	"
2,4-Dinitrotoluene	U			93	"	"	"	"	"
Hexachlorobenzene	U			93	"	"	"	"	"
Pentachlorophenol	U	(LCS), UI		230	"	"	"	"	"

Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	240			104%		70-130	"	"	"
2-Fluorophenol	240			103%		70-130	"	"	"
Phenol-d5	270			118%		70-130	"	"	"
Nitrobenzene-d5	230			100%		70-130	"	"	"
2-Fluorobiphenyl	230			97.6%		70-130	"	"	"
2,4,6-Tribromophenol	210			92.8%		70-130	"	"	"
Terphenyl-d14	230			98.0%		70-130	"	"	"

1705002-12 2nd Filtrate (1705002-20)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E049	May-26-17	Jun-10-17

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1705002-12 2nd Filtrate (1705002-20)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
2-Methylphenol	U			0.025	mg/L	1	B17F049	May-26-17	Jun-10-17
3+4-Methylphenol	U			0.051	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U			0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.39		62.0%	20-71	"	"	"
2-Fluorophenol	0.41		65.3%	29-73	"	"	"
Phenol-d5	0.40	Q	62.8%	22-62	"	"	"
Nitrobenzene-d5	0.53		83.5%	42-90	"	"	"
2-Fluorobiphenyl	0.59		92.9%	40-93	"	"	"
2,4,6-Tribromophenol	0.58		92.3%	43-107	"	"	"
Terphenyl-d14	0.60		94.4%	59-111	"	"	"

CS-01 (1705003-01)

Matrix: Other

Sampled: May-04-17 11:48

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			110	mg/L	10	B17F036	Jun-08-17	Jun-11-17
2-Methylphenol	U			110	"	"	"	"	"
3+4-Methylphenol	U			230	"	"	"	"	"
Hexachloroethane	U			110	"	"	"	"	"
Nitrobenzene	U			110	"	"	"	"	"
Hexachlorobutadiene	U			110	"	"	"	"	"
2,4,6-Trichlorophenol	U			110	"	"	"	"	"
2,4,5-Trichlorophenol	U			110	"	"	"	"	"
2,4-Dinitrotoluene	U			110	"	"	"	"	"

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CS-01 (1705003-01)

Matrix: Other

Sampled: May-04-17 11:48

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Hexachlorobenzene	U			110	mg/L	10	B17F036	Jun-08-17	Jun-11-17
Pentachlorophenol	Rejected	(CCV), (LCS), (MS)		290	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	290		103%	70-130	"	"	"
2-Fluorophenol	290		102%	70-130	"	"	"
Phenol-d5	300		107%	70-130	"	"	"
Nitrobenzene-d5	280		98.0%	70-130	"	"	"
2-Fluorobiphenyl	280		98.4%	70-130	"	"	"
2,4,6-Tribromophenol	200	Q	69.6%	70-130	"	"	"
Terphenyl-d14	290		102%	70-130	"	"	"

CS-02 (1705003-02)

Matrix: Other

Sampled: May-04-17 12:31

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U	(SURR), UJ		98	mg/L	10	B17F036	Jun-08-17	Jun-27-17
2-Methylphenol	U			98	"	"	"	"	"
3+4-Methylphenol	U			200	"	"	"	"	"
Hexachloroethane	U			98	"	"	"	"	"
Nitrobenzene	U			98	"	"	"	"	"
Hexachlorobutadiene	U			98	"	"	"	"	"
2,4,6-Trichlorophenol	U			98	"	"	"	"	"
2,4,5-Trichlorophenol	U			98	"	"	"	"	"
2,4-Dinitrotoluene	U			98	"	"	"	"	"
Hexachlorobenzene	U			98	"	"	"	"	"
Pentachlorophenol	U	(CCV), (LCS), (TF), UJ		2500	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	140	Q	56.0%	70-130	"	"	"
2-Fluorophenol	240		96.8%	70-130	"	"	"
Phenol-d5	220		88.0%	70-130	"	"	"

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CS-02 (1705003-02)

Matrix: Other

Sampled: May-04-17 12:31

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Nitrobenzene-d5	270			112%		70-130	B17F036	Jun-08-17	Jun-27-17
2-Fluorobiphenyl	260			106%		70-130	"	"	"
2,4,6-Tribromophenol	210			85.2%		70-130	"	"	"
Terphenyl-d14	240			99.2%		70-130	"	"	"

CS-03 (1705003-03)

Matrix: Other

Sampled: May-04-17 12:35

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U	(SURR), UJ		100	mg/L	10	B17F036	Jun-08-17	Jun-27-17
2-Methylphenol	U			100	"	"	"	"	"
3+4-Methylphenol	U			210	"	"	"	"	"
Hexachloroethane	U			100	"	"	"	"	"
Nitrobenzene	U			100	"	"	"	"	"
Hexachlorobutadiene	U			100	"	"	"	"	"
2,4,6-Trichlorophenol	U			100	"	"	"	"	"
2,4,5-Trichlorophenol	U			100	"	"	"	"	"
2,4-Dinitrotoluene	U			100	"	"	"	"	"
Hexachlorobenzene	U			100	"	"	"	"	"
Pentachlorophenol	U	UJ, (CCV), (LCS), (TF)		2600	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	160	Q		60.8%		70-130	"	"	"
2-Fluorophenol	280			110%		70-130	"	"	"
Phenol-d5	260			101%		70-130	"	"	"
Nitrobenzene-d5	240			92.0%		70-130	"	"	"
2-Fluorobiphenyl	260			99.2%		70-130	"	"	"
2,4,6-Tribromophenol	170	Q		64.0%		70-130	"	"	"
Terphenyl-d14	260			99.2%		70-130	"	"	"

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CS-04 (1705003-04)

Matrix: Other

Sampled: May-04-17 13:02

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E049	May-26-17	Jun-10-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	U			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U			0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.30		47.6%	20-71	"	"	"
2-Fluorophenol	0.30		47.7%	29-73	"	"	"
Phenol-d5	0.31		49.4%	22-62	"	"	"
Nitrobenzene-d5	0.43		68.7%	42-90	"	"	"
2-Fluorobiphenyl	0.48		76.2%	40-93	"	"	"
2,4,6-Tribromophenol	0.49		78.9%	43-107	"	"	"
Terphenyl-d14	0.28	Q	44.2%	59-111	"	"	"

CS-05 (1705003-05)

Matrix: Other

Sampled: May-04-17 13:12

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E048	May-15-17	Jun-10-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	U			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U	(CCV), (TF), UJ		0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.025	"	"	"	"	"

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CS-05 (1705003-05)

Matrix: Other

Sampled: May-04-17 13:12

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Hexachlorobenzene	U			0.025	mg/L	1	B17E048	May-15-17	Jun-10-17
Pentachlorophenol	U	(CCV), (TF), UJ		0.62	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.31		49.3%	20-71	"	"	"
2-Fluorophenol	0.32		50.4%	29-73	"	"	"
Phenol-d5	0.39	Q	63.0%	22-62	"	"	"
Nitrobenzene-d5	0.48		76.6%	42-90	"	"	"
2-Fluorobiphenyl	0.53		85.1%	40-93	"	"	"
2,4,6-Tribromophenol	0.44	(CCV), J	70.6%	43-107	"	"	"
Terphenyl-d14	0.35	Q	56.2%	59-111	"	"	"

CS-06 (1705003-06)

Matrix: Other

Sampled: May-04-17 13:29

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			4.1	mg/L	32	B17E048	May-15-17	Jun-11-17
2-Methylphenol	U			0.78	"	"	"	"	"
3+4-Methylphenol	U			1.6	"	"	"	"	"
Hexachloroethane	U			0.78	"	"	"	"	"
Nitrobenzene	U			0.78	"	"	"	"	"
Hexachlorobutadiene	U			0.78	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.78	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.78	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.78	"	"	"	"	"
Hexachlorobenzene	U			0.78	"	"	"	"	"
Pentachlorophenol	U	(CCV), UJ		0.78	"	"	"	"	"

CS-07 (1705003-07)

Matrix: Other

Sampled: May-04-17 13:55

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E049	May-26-17	Jun-26-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	U			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"

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CS-07 (1705003-07)

Matrix: Other

Sampled: May-04-17 13:55

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrobenzene	U			0.025	mg/L	i	B17E049	May-26-17	Jun-26-17
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U			0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U	(CCV), UJ		0.025	"	"	"	"	"

Surrogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.27		43.9%	20-71	"	"	"
2-Fluorophenol	0.45		71.9%	29-73	"	"	"
Phenol-d5	0.41	Q	65.4%	22-62	"	"	"
Nitrobenzene-d5	0.53		84.7%	42-90	"	"	"
2-Fluorobiphenyl	0.46		73.3%	40-93	"	"	"
2,4,6-Tribromophenol	0.54		86.8%	43-107	"	"	"
Terphenyl-d14	0.52		83.9%	59-111	"	"	"

CS-08 (1705003-08)

Matrix: Other

Sampled: May-04-17 14:15

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.17	mg/L	j	B17E049	May-26-17	Jun-10-17
2-Methylphenol	U			0.033	"	"	"	"	"
3+4-Methylphenol	U			0.067	"	"	"	"	"
Hexachloroethane	U			0.033	"	"	"	"	"
Nitrobenzene	U			0.033	"	"	"	"	"
Hexachlorobutadiene	U			0.033	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.033	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.033	"	"	"	"	"
2,4-Dinitrotoluene	U			0.033	"	"	"	"	"
Hexachlorobenzene	U			0.033	"	"	"	"	"
Pentachlorophenol	U			0.033	"	"	"	"	"

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CS-08 (1705003-08)

Matrix: Other

Sampled: May-04-17 14:15

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.54			64.8%		20-71	B17E049	May-26-17	Jun-10-17
2-Fluorophenol	0.57			68.2%		29-73	"	"	"
Phenol-d5	0.62	Q		73.8%		22-62	"	"	"
Nitrobenzene-d5	0.63			75.6%		42-90	"	"	"
2-Fluorobiphenyl	0.65			77.8%		40-93	"	"	"
2,4,6-Tribromophenol	0.74			88.4%		43-107	"	"	"
Terphenyl-d14	0.79			94.2%		59-111	"	"	"

SFS08 (1705004-07)

Matrix: Other

Sampled: May-04-17 15:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.3	mg/L	10	B17E049	May-26-17	Jun-10-17
2-Methylphenol	U			0.25	"	"	"	"	"
3+4-Methylphenol	1.8			0.50	"	"	"	"	"
Hexachloroethane	U			0.25	"	"	"	"	"
Nitrobenzene	U			0.25	"	"	"	"	"
Hexachlorobutadiene	U			0.25	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.25	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.25	"	"	"	"	"
2,4-Dinitrotoluene	U			0.25	"	"	"	"	"
Hexachlorobenzene	U			0.25	"	"	"	"	"
Pentachlorophenol	U			0.25	"	"	"	"	"
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.42			66.8%		20-71	"	"	"
2-Fluorophenol	0.44			70.4%		29-73	"	"	"
Phenol-d5	0.46	Q		73.2%		22-62	"	"	"
Nitrobenzene-d5	0.62	Q		99.6%		42-90	"	"	"
2-Fluorobiphenyl	0.57			91.2%		40-93	"	"	"
2,4,6-Tribromophenol	0.57			91.6%		43-107	"	"	"

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SFS08 (1705004-07)

Matrix: Other

Sampled: May-04-17 15:10

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
<i>Terphenyl-d14</i>	0.58			92.4%		59-111	B17E049	May-26-17	Jun-10-17

SFS09 (1705004-08)

Matrix: Other

Sampled: May-04-17 15:23

Received: May-05-17 07:50

Sample Qualifiers: (H)

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			1.3	mg/L	10	B17E049	May-26-17	Jun-10-17
2-Methylphenol	U			0.25	"	"	"	"	"
3+4-Methylphenol	0.74			0.50	"	"	"	"	"
Hexachloroethane	U			0.25	"	"	"	"	"
Nitrobenzene	U			0.25	"	"	"	"	"
Hexachlorobutadiene	U			0.25	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.25	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.25	"	"	"	"	"
2,4-Dinitrotoluene	U			0.25	"	"	"	"	"
Hexachlorobenzene	U			0.25	"	"	"	"	"
Pentachlorophenol	U	(MS), UJ		0.25	"	"	"	"	"

Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
<i>Pyridine-d5</i>	0.34			54.0%		20-71	"	"	"
<i>2-Fluorophenol</i>	0.45			71.6%		29-73	"	"	"
<i>Phenol-d5</i>	0.48	Q		76.8%		22-62	"	"	"
<i>Nitrobenzene-d5</i>	0.71	Q		114%		42-90	"	"	"
<i>2-Fluorobiphenyl</i>	0.63	Q		101%		40-93	"	"	"
<i>2,4,6-Tribromophenol</i>	0.43			68.8%		43-107	"	"	"
<i>Terphenyl-d14</i>	0.58			92.0%		59-111	"	"	"

SFS10 (1705004-09)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E048	May-15-17	Jun-10-17
2-Methylphenol	U			0.025	"	"	"	"	"

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SFS10 (1705004-09)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
3+4-Methylphenol	0.055			0.049	mg/L	1	B17E048	May-15-17	Jun-10-17
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.33		53.9%	20-71	"	"	"
2-Fluorophenol	0.39		63.8%	29-73	"	"	"
Phenol-d5	0.40	Q	64.8%	22-62	"	"	"
Nitrobenzene-d5	0.49		79.5%	42-90	"	"	"
2-Fluorobiphenyl	0.56		90.4%	40-93	"	"	"
2,4,6-Tribromophenol	0.55		89.5%	43-107	"	"	"
Terphenyl-d14	0.57		92.5%	59-111	"	"	"

SFS10 Dup (1705004-10)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Pyridine	U			0.13	mg/L	1	B17E048	May-15-17	Jun-10-17
2-Methylphenol	U			0.025	"	"	"	"	"
3+4-Methylphenol	0.056			0.050	"	"	"	"	"
Hexachloroethane	U			0.025	"	"	"	"	"
Nitrobenzene	U			0.025	"	"	"	"	"
Hexachlorobutadiene	U			0.025	"	"	"	"	"
2,4,6-Trichlorophenol	U			0.025	"	"	"	"	"
2,4,5-Trichlorophenol	U			0.025	"	"	"	"	"
2,4-Dinitrotoluene	U	(RL), UJ		0.025	"	"	"	"	"
Hexachlorobenzene	U			0.025	"	"	"	"	"
Pentachlorophenol	U			0.025	"	"	"	"	"

Surogate	Result		%REC	%REC Limits	Batch	Prepared	Analyzed
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US EPA Region 5 Chicago Regional Laboratory

SFS10 Dup (1705004-10)

Matrix: Other

Sampled: May-04-17 15:37

Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Surogate	Result			%REC		%REC Limits	Batch	Prepared	Analyzed
Pyridine-d5	0.39			62.4%		20-71	B17E048	May-15-17	Jun-10-17
2-Fluorophenol	0.43			68.4%		29-73	"	"	"
Phenol-d5	0.43	Q		68.6%		22-62	"	"	"
Nitrobenzene-d5	0.52			83.8%		42-90	"	"	"
2-Fluorobiphenyl	0.59	Q		94.5%		40-93	"	"	"
2,4,6-Tribromophenol	0.58			93.6%		43-107	"	"	"
Terphenyl-d14	0.55			88.7%		59-111	"	"	"

Semivolatiles by GC/MS, EPA 8270D (modified) - Quality Control
US EPA Region 5 Chicago Regional Laboratory

Batch B17E048 - Solvent Extraction

Blank (B17E048-BLK1)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						
Nitrobenzene	U			0.025	"						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						
2,4-Dinitrotoluene	U			0.025	"						
Hexachlorobenzene	U			0.025	"						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.31				"	0.6250		49.5%	20-71		
Surrogate: 2-Fluorophenol	0.45				"	0.6250		71.8%	29-73		
Surrogate: Phenol-d5	0.38				"	0.6250		61.0%	22-62		
Surrogate: Nitrobenzene-d5	0.58	Q			"	0.6250		92.2%	42-90		
Surrogate: 2-Fluorobiphenyl	0.56				"	0.6250		89.6%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.62				"	0.6250		99.8%	43-107		
Surrogate: Terphenyl-d14	0.62				"	0.6250		100%	59-111		

Blank (B17E048-BLK2)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						

US EPA Region 5 Chicago Regional Laboratory

Batch B17E048 - Solvent Extraction

Blank (B17E048-BLK2)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Nitrobenzene	U			0.025	mg/L						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						
2,4-Dinitrotoluene	U			0.025	"						
Hexachlorobenzene	U			0.025	"						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.23				"	0.6250		36.2%	20-71		
Surrogate: 2-Fluorophenol	0.46	Q			"	0.6250		74.2%	29-73		
Surrogate: Phenol-d5	0.39				"	0.6250		61.9%	22-62		
Surrogate: Nitrobenzene-d5	0.58	Q			"	0.6250		93.5%	42-90		
Surrogate: 2-Fluorobiphenyl	0.57				"	0.6250		90.6%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.62				"	0.6250		98.7%	43-107		
Surrogate: Terphenyl-d14	0.61				"	0.6250		96.9%	59-111		

Blank (B17E048-BLK3)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						
Nitrobenzene	U			0.025	"						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						
2,4-Dinitrotoluene	U			0.025	"						
Hexachlorobenzene	U			0.025	"						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.41				"	0.6250		66.3%	20-71		
Surrogate: 2-Fluorophenol	0.45				"	0.6250		71.4%	29-73		
Surrogate: Phenol-d5	0.38				"	0.6250		60.2%	22-62		

Batch B17E048 - Solvent Extraction

Blank (B17E048-BLK3)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: Nitrobenzene-d5	3.0	Q			mg/L	0.6250		475%	42-90		
Surrogate: 2-Fluorobiphenyl	0.57				"	0.6250		91.4%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.64				"	0.6250		102%	43-107		
Surrogate: Terphenyl-d14	0.60				"	0.6250		95.8%	59-111		

Blank (B17E048-BLK4)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						
Nitrobenzene	U			0.025	"						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						
2,4-Dinitrotoluene	U			0.025	"						
Hexachlorobenzene	U			0.025	"						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.39				"	0.6250		62.8%	20-71		
Surrogate: 2-Fluorophenol	0.40				"	0.6250		63.7%	29-73		
Surrogate: Phenol-d5	0.34				"	0.6250		53.9%	22-62		
Surrogate: Nitrobenzene-d5	2.6	Q			"	0.6250		412%	42-90		
Surrogate: 2-Fluorobiphenyl	0.52				"	0.6250		83.8%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.63				"	0.6250		101%	43-107		
Surrogate: Terphenyl-d14	0.51				"	0.6250		81.1%	59-111		

Blank (B17E048-BLK5)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.024	"						

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Batch B17E048 - Solvent Extraction

Blank (B17E048-BLK5)

Prepared: May-15-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
3+4-Methylphenol	U			0.049	mg/L						
Hexachloroethane	U			0.024	"						
Nitrobenzene	U			0.024	"						
Hexachlorobutadiene	U			0.024	"						
2,4,6-Trichlorophenol	U			0.024	"						
2,4,5-Trichlorophenol	U			0.024	"						
2,4-Dinitrotoluene	U			0.024	"						
Hexachlorobenzene	U			0.024	"						
Pentachlorophenol	U			0.024	"						
Surrogate: Pyridine-d5	0.47	Q			"	0.6098		76.9%	20-71		
Surrogate: 2-Fluorophenol	0.44				"	0.6098		73.0%	29-73		
Surrogate: Phenol-d5	0.38				"	0.6098		61.6%	22-62		
Surrogate: Nitrobenzene-d5	2.8	Q			"	0.6098		459%	42-90		
Surrogate: 2-Fluorobiphenyl	0.54				"	0.6098		88.6%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.63				"	0.6098		103%	43-107		
Surrogate: Terphenyl-d14	0.69	Q			"	0.6098		113%	59-111		

LCS (B17E048-BS1)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.38			0.13	mg/L	0.6250		61.1%	32-68		
2-Methylphenol	0.51			0.025	"	0.6250		82.1%	26-107		
3+4-Methylphenol	0.99			0.050	"	1.250		79.2%	29-101		
Hexachloroethane	0.43			0.025	"	0.6250		69.2%	31-94		
Nitrobenzene	0.54			0.025	"	0.6250		86.4%	33-111		
Hexachlorobutadiene	0.46			0.025	"	0.6250		72.8%	31-100		
2,4,6-Trichlorophenol	0.58			0.025	"	0.6250		92.8%	42-112		
2,4,5-Trichlorophenol	0.59			0.025	"	0.6250		95.1%	51-117		
2,4-Dinitrotoluene	0.59			0.025	"	0.6250		94.6%	63-128		
Hexachlorobenzene	0.56			0.025	"	0.6250		90.2%	55-122		
Pentachlorophenol	0.49			0.025	"	0.6250		78.4%	60-120		
Surrogate: Pyridine-d5	0.39				"	0.6250		62.8%	20-71		

US EPA Region 5 Chicago Regional Laboratory

Batch B17E048 - Solvent Extraction

LCS (B17E048-BS1)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2-Fluorophenol	0.43				mg/L	0.6250		69.0%	29-73		
Surrogate: Phenol-d5	0.36				"	0.6250		56.9%	22-62		
Surrogate: Nitrobenzene-d5	0.57	Q			"	0.6250		91.6%	42-90		
Surrogate: 2-Fluorobiphenyl	0.55				"	0.6250		87.3%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.55				"	0.6250		88.3%	43-107		
Surrogate: Terphenyl-d14	0.58				"	0.6250		92.9%	59-111		

LCS Dup (B17E048-BSD1)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.34			0.13	mg/L	0.6250		53.8%	32-68	12.7	34
2-Methylphenol	0.49			0.025	"	0.6250		79.1%	26-107	3.72	30
3+4-Methylphenol	0.95			0.050	"	1.250		76.2%	29-101	3.86	30
Hexachloroethane	0.47			0.025	"	0.6250		74.6%	31-94	7.57	30
Nitrobenzene	0.55			0.025	"	0.6250		88.0%	33-111	1.93	32
Hexachlorobutadiene	0.46			0.025	"	0.6250		74.3%	31-100	1.96	30
2,4,6-Trichlorophenol	0.56			0.025	"	0.6250		89.7%	42-112	3.37	30
2,4,5-Trichlorophenol	0.56			0.025	"	0.6250		90.1%	51-117	5.36	30
2,4-Dinitrotoluene	0.60			0.025	"	0.6250		96.0%	63-128	1.43	30
Hexachlorobenzene	0.56			0.025	"	0.6250		90.1%	55-122	0.133	30
Pentachlorophenol	0.48			0.025	"	0.6250		77.6%	60-120	1.08	30
Surrogate: Pyridine-d5	0.34				"	0.6250		54.4%	20-71		
Surrogate: 2-Fluorophenol	0.43				"	0.6250		68.3%	29-73		
Surrogate: Phenol-d5	0.36				"	0.6250		57.0%	22-62		
Surrogate: Nitrobenzene-d5	0.58	Q			"	0.6250		93.2%	42-90		
Surrogate: 2-Fluorobiphenyl	0.56				"	0.6250		90.4%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.57				"	0.6250		91.6%	43-107		
Surrogate: Terphenyl-d14	0.57				"	0.6250		91.5%	59-111		

MRL Check (B17E048-MRL1)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.016			0.13	mg/L	2.500E-2		62.0%	32-68		

US EPA Region 5 Chicago Regional Laboratory

Batch B17E048 - Solvent Extraction

MRL Check (B17E048-MRL1)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
2-Methylphenol	0.016			0.025	mg/L	2.500E-2		62.0%	26-107		
3+4-Methylphenol	0.028			0.050	"	5.000E-2		55.0%	29-101		
Hexachloroethane	0.013			0.025	"	2.500E-2		51.0%	31-94		
Nitrobenzene	0.019			0.025	"	2.500E-2		75.0%	33-111		
Hexachlorobutadiene	0.014			0.025	"	2.500E-2		57.0%	31-100		
2,4,6-Trichlorophenol	0.015			0.025	"	2.500E-2		60.0%	42-112		
2,4,5-Trichlorophenol	0.018			0.025	"	2.500E-2		71.0%	51-117		
2,4-Dinitrotoluene	0.015	Q		0.025	"	2.500E-2		60.0%	63-128		
Hexachlorobenzene	0.018			0.025	"	2.500E-2		70.0%	55-122		
Pentachlorophenol	0.020			0.025	"	2.500E-2		82.0%	60-120		
Surrogate: Pyridine-d5	0.39				"	0.6250		63.2%	20-71		
Surrogate: 2-Fluorophenol	0.34				"	0.6250		53.7%	29-73		
Surrogate: Phenol-d5	0.29				"	0.6250		46.0%	22-62		
Surrogate: Nitrobenzene-d5	0.44				"	0.6250		70.9%	42-90		
Surrogate: 2-Fluorobiphenyl	0.43				"	0.6250		69.2%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.45				"	0.6250		72.4%	43-107		
Surrogate: Terphenyl-d14	0.45				"	0.6250		72.3%	59-111		

MRL Check (B17E048-MRL2)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.076			0.13	mg/L	0.1250		60.6%	32-68		
2-Methylphenol	0.090			0.025	"	0.1250		72.0%	26-107		
3+4-Methylphenol	0.18			0.050	"	0.2500		71.8%	29-101		
Hexachloroethane	0.084			0.025	"	0.1250		67.0%	31-94		
Nitrobenzene	0.11			0.025	"	0.1250		86.0%	33-111		
Hexachlorobutadiene	0.087			0.025	"	0.1250		69.6%	31-100		
2,4,6-Trichlorophenol	0.11			0.025	"	0.1250		85.2%	42-112		
2,4,5-Trichlorophenol	0.11			0.025	"	0.1250		88.2%	51-117		
2,4-Dinitrotoluene	0.12			0.025	"	0.1250		92.8%	63-128		
Hexachlorobenzene	0.11			0.025	"	0.1250		89.4%	55-122		

Batch B17E048 - Solvent Extraction

MRI Check (B17E048-MRL2)

Prepared: May-15-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pentachlorophenol	0.082			0.025	mg/L	0.1250		65.8%	60-120		
Surrogate: Pyridine-d5	0.41				"	0.6250		63.6%	20-71		
Surrogate: 2-Fluorophenol	0.42				"	0.6250		67.8%	29-73		
Surrogate: Phenol-d5	0.35				"	0.6250		56.3%	22-62		
Surrogate: Nitrobenzene-d5	0.54				"	0.6250		86.4%	42-90		
Surrogate: 2-Fluorobiphenyl	0.54				"	0.6250		86.5%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.58				"	0.6250		93.0%	43-107		
Surrogate: Terphenyl-d14	0.59				"	0.6250		94.7%	59-111		

Matrix Spike (B17E048-MS1)

Source: 1705004-10

Prepared: May-15-17 Analyzed: Jun-10-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.32			0.13	mg/L	0.6250	U	51.7%	32-68		
2-Methylphenol	0.53			0.025	"	0.6250	U	84.9%	26-107		
3+4-Methylphenol	1.1			0.050	"	1.250	0.056	86.7%	29-101		
Hexachloroethane	0.36			0.025	"	0.6250	U	58.4%	31-94		
Nitrobenzene	0.47			0.025	"	0.6250	U	74.7%	33-111		
Hexachlorobutadiene	0.41			0.025	"	0.6250	U	65.3%	31-100		
2,4,6-Trichlorophenol	0.60			0.025	"	0.6250	U	95.6%	42-112		
2,4,5-Trichlorophenol	0.56			0.025	"	0.6250	U	89.7%	51-117		
2,4-Dinitrotoluene	0.57			0.025	"	0.6250	U	90.4%	63-128		
Hexachlorobenzene	0.57			0.025	"	0.6250	U	91.2%	55-122		
Pentachlorophenol	0.51			0.025	"	0.6250	U	81.8%	60-120		
Surrogate: Pyridine-d5	0.33				"	0.6250		52.8%	20-71		
Surrogate: 2-Fluorophenol	0.40				"	0.6250		63.5%	29-73		
Surrogate: Phenol-d5	0.40	Q			"	0.6250		64.7%	22-62		
Surrogate: Nitrobenzene-d5	0.47				"	0.6250		74.6%	42-90		
Surrogate: 2-Fluorobiphenyl	0.57				"	0.6250		91.9%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.57				"	0.6250		91.2%	43-107		
Surrogate: Terphenyl-d14	0.56				"	0.6250		90.1%	59-111		

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Batch B17E048 - Solvent Extraction

Matrix Spike Dup (B17E048-MSD1)		Source: 1705004-10		Prepared: May-15-17 Analyzed: Jun-10-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.33			0.13	mg/L	0.6250	U	53.2%	32-68	2.82	34
2-Methylphenol	0.54			0.025	"	0.6250	U	86.8%	26-107	2.28	30
3+4-Methylphenol	1.2			0.050	"	1.250	0.056	88.5%	29-101	1.89	30
Hexachloroethane	0.35			0.025	"	0.6250	U	56.3%	31-94	3.63	30
Nitrobenzene	0.50			0.025	"	0.6250	U	79.8%	33-111	6.58	32
Hexachlorobutadiene	0.41			0.025	"	0.6250	U	65.7%	31-100	0.610	30
2,4,6-Trichlorophenol	0.59			0.025	"	0.6250	U	95.0%	42-112	0.672	30
2,4,5-Trichlorophenol	0.55			0.025	"	0.6250	U	87.7%	51-117	2.21	30
2,4-Dinitrotoluene	0.57			0.025	"	0.6250	U	90.8%	63-128	0.397	30
Hexachlorobenzene	0.56			0.025	"	0.6250	U	89.2%	55-122	2.31	30
Pentachlorophenol	0.50			0.025	"	0.6250	U	80.4%	60-120	1.63	30
Surrogate: Pyridine-d5	0.34				"	0.6250		53.8%	20-71		
Surrogate: 2-Fluorophenol	0.42				"	0.6250		67.5%	29-73		
Surrogate: Phenol-d5	0.43	Q			"	0.6250		69.2%	22-62		
Surrogate: Nitrobenzene-d5	0.52				"	0.6250		83.9%	42-90		
Surrogate: 2-Fluorobiphenyl	0.55				"	0.6250		87.7%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.59				"	0.6250		93.7%	43-107		
Surrogate: Terphenyl-d14	0.59				"	0.6250		94.9%	59-111		

Batch B17E049 - Solvent Extraction

Blank (B17E049-BLK1)		Prepared: May-26-17 Analyzed: Jun-05-17									
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						
Nitrobenzene	U			0.025	"						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						

Batch B17E049 - Solvent Extraction

Blank (B17E049-BLK1) Prepared: May-26-17 Analyzed: Jun-05-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
2,4-Dinitrotoluene	U			0.025	mg/L						
Hexachlorobenzene	U			0.025	"						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.36				"	0.6250		57.6%	20-71		
Surrogate: 2-Fluorophenol	0.44				"	0.6250		70.1%	29-73		
Surrogate: Phenol-d5	0.37				"	0.6250		59.7%	22-62		
Surrogate: Nitrobenzene-d5	0.59	Q			"	0.6250		94.1%	42-90		
Surrogate: 2-Fluorobiphenyl	0.57				"	0.6250		91.1%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.61				"	0.6250		97.1%	43-107		
Surrogate: Terphenyl-d14	0.61				"	0.6250		98.2%	59-111		

Blank (B17E049-BLK2) Prepared: May-26-17 Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						
Nitrobenzene	U			0.025	"						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						
2,4-Dinitrotoluene	U			0.025	"						
Hexachlorobenzene	U			0.025	"						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.40				"	0.6250		64.2%	20-71		
Surrogate: 2-Fluorophenol	0.46	Q			"	0.6250		73.8%	29-73		
Surrogate: Phenol-d5	0.38				"	0.6250		61.4%	22-62		
Surrogate: Nitrobenzene-d5	0.61	Q			"	0.6250		97.0%	42-90		
Surrogate: 2-Fluorobiphenyl	0.60	Q			"	0.6250		95.3%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.63				"	0.6250		101%	43-107		
Surrogate: Terphenyl-d14	0.60				"	0.6250		95.6%	59-111		

Batch B17E049 - Solvent Extraction

Blank (B17E049-BLK3)

Prepared: May-26-17 Analyzed: Jun-06-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.024	"						
3+4-Methylphenol	U			0.049	"						
Hexachloroethane	U			0.024	"						
Nitrobenzene	U			0.024	"						
Hexachlorobutadiene	U			0.024	"						
2,4,6-Trichlorophenol	U			0.024	"						
2,4,5-Trichlorophenol	U			0.024	"						
2,4-Dinitrotoluene	U			0.024	"						
Hexachlorobenzene	U			0.024	"						
Pentachlorophenol	U			0.024	"						
Surrogate: Pyridine-d5	0.41				"	0.6098		67.8%	20-71		
Surrogate: 2-Fluorophenol	0.42				"	0.6098		68.4%	29-73		
Surrogate: Phenol-d5	0.35				"	0.6098		57.0%	22-62		
Surrogate: Nitrobenzene-d5	0.54				"	0.6098		89.2%	42-90		
Surrogate: 2-Fluorobiphenyl	0.55				"	0.6098		89.9%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.60				"	0.6098		98.5%	43-107		
Surrogate: Terphenyl-d14	0.58				"	0.6098		95.0%	59-111		

Blank (B17E049-BLK4)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			0.13	mg/L						
2-Methylphenol	U			0.025	"						
3+4-Methylphenol	U			0.050	"						
Hexachloroethane	U			0.025	"						
Nitrobenzene	U			0.025	"						
Hexachlorobutadiene	U			0.025	"						
2,4,6-Trichlorophenol	U			0.025	"						
2,4,5-Trichlorophenol	U			0.025	"						
2,4-Dinitrotoluene	U			0.025	"						

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Batch B17E049 - Solvent Extraction

Blank (B17E049-BLK4)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	U			0.025	mg/L						
Pentachlorophenol	U			0.025	"						
Surrogate: Pyridine-d5	0.43				"	0.6250		69.4%	20-71		
Surrogate: 2-Fluorophenol	0.43				"	0.6250		69.1%	29-73		
Surrogate: Phenol-d5	0.36				"	0.6250		56.9%	22-62		
Surrogate: Nitrobenzene-d5	0.56	Q			"	0.6250		90.4%	42-90		
Surrogate: 2-Fluorobiphenyl	0.56				"	0.6250		90.3%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.57				"	0.6250		91.6%	43-107		
Surrogate: Terphenyl-d14	0.58				"	0.6250		93.0%	59-111		

LCS (B17E049-BS1)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.34			0.13	mg/L	0.6250		53.7%	32-68		
2-Methylphenol	0.42			0.025	"	0.6250		67.2%	26-107		
3+4-Methylphenol	0.80			0.050	"	1.250		64.3%	29-101		
Hexachloroethane	0.41			0.025	"	0.6250		66.4%	31-94		
Nitrobenzene	0.45			0.025	"	0.6250		72.5%	33-111		
Hexachlorobutadiene	0.43			0.025	"	0.6250		68.2%	31-100		
2,4,6-Trichlorophenol	0.47			0.025	"	0.6250		75.5%	42-112		
2,4,5-Trichlorophenol	0.49			0.025	"	0.6250		78.2%	51-117		
2,4-Dinitrotoluene	0.55			0.025	"	0.6250		88.2%	63-128		
Hexachlorobenzene	0.55			0.025	"	0.6250		88.8%	55-122		
Pentachlorophenol	0.43			0.025	"	0.6250		68.4%	60-120		
Surrogate: Pyridine-d5	0.35				"	0.6250		55.6%	20-71		
Surrogate: 2-Fluorophenol	0.35				"	0.6250		56.2%	29-73		
Surrogate: Phenol-d5	0.31				"	0.6250		50.0%	22-62		
Surrogate: Nitrobenzene-d5	0.48				"	0.6250		77.1%	42-90		
Surrogate: 2-Fluorobiphenyl	0.50				"	0.6250		80.2%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.51				"	0.6250		81.2%	43-107		
Surrogate: Terphenyl-d14	0.59				"	0.6250		93.6%	59-111		

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Batch B17E049 - Solvent Extraction

LCS Dup (B17E049-BSD1)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.34			0.13	mg/L	0.6250		54.8%	32-68	2.06	34
2-Methylphenol	0.40			0.025	"	0.6250		64.0%	26-107	4.76	30
3+4-Methylphenol	0.79			0.050	"	1.250		63.0%	29-101	2.11	30
Hexachloroethane	0.42			0.025	"	0.6250		66.6%	31-94	0.361	30
Nitrobenzene	0.47			0.025	"	0.6250		75.6%	33-111	4.16	32
Hexachlorobutadiene	0.44			0.025	"	0.6250		69.7%	31-100	2.15	30
2,4,6-Trichlorophenol	0.48			0.025	"	0.6250		77.4%	42-112	2.51	30
2,4,5-Trichlorophenol	0.50			0.025	"	0.6250		80.2%	51-117	2.53	30
2,4-Dinitrotoluene	0.54			0.025	"	0.6250		86.4%	63-128	1.97	30
Hexachlorobenzene	0.56			0.025	"	0.6250		89.9%	55-122	1.30	30
Pentachlorophenol	0.46			0.025	"	0.6250		74.3%	60-120	8.35	30
Surrogate: Pyridine-d5	0.35				"	0.6250		56.2%	20-71		
Surrogate: 2-Fluorophenol	0.36				"	0.6250		57.0%	29-73		
Surrogate: Phenol-d5	0.30				"	0.6250		48.0%	22-62		
Surrogate: Nitrobenzene-d5	0.50				"	0.6250		79.4%	42-90		
Surrogate: 2-Fluorobiphenyl	0.52				"	0.6250		82.4%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.52				"	0.6250		83.2%	43-107		
Surrogate: Terphenyl-d14	0.57				"	0.6250		91.1%	59-111		

MRL Check (B17E049-MRL1)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.014			0.13	mg/L	2.500E-2		56.0%	32-68		
2-Methylphenol	0.018			0.025	"	2.500E-2		72.0%	26-107		
3+4-Methylphenol	0.032			0.050	"	5.000E-2		65.0%	29-101		
Hexachloroethane	0.019			0.025	"	2.500E-2		75.0%	31-94		
Nitrobenzene	0.022			0.025	"	2.500E-2		88.0%	33-111		
Hexachlorobutadiene	0.020			0.025	"	2.500E-2		82.0%	31-100		
2,4,6-Trichlorophenol	0.019			0.025	"	2.500E-2		77.0%	42-112		
2,4,5-Trichlorophenol	0.019			0.025	"	2.500E-2		75.0%	51-117		
2,4-Dinitrotoluene	0.019			0.025	"	2.500E-2		75.0%	63-128		

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Batch B17E049 - Solvent Extraction

MRL Check (B17E049-MRL1)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	0.022			0.025	mg/L	2.500E-2		89.0%	55-122		
Pentachlorophenol	0.023			0.025	"	2.500E-2		92.0%	60-120		
Surrogate: Pyridine-d5	0.43				"	0.6250		68.0%	20-71		
Surrogate: 2-Fluorophenol	0.42				"	0.6250		67.6%	29-73		
Surrogate: Phenol-d5	0.35				"	0.6250		56.4%	22-62		
Surrogate: Nitrobenzene-d5	0.58	Q			"	0.6250		92.6%	42-90		
Surrogate: 2-Fluorobiphenyl	0.57				"	0.6250		91.8%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.56				"	0.6250		90.0%	43-107		
Surrogate: Terphenyl-d14	0.58				"	0.6250		92.8%	59-111		

MRL Check (B17E049-MRL2)

Prepared: May-26-17 Analyzed: Jun-09-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.049			0.13	mg/L	0.1266		38.8%	32-68		
2-Methylphenol	0.091			0.025	"	0.1266		72.2%	26-107		
3+4-Methylphenol	0.17			0.051	"	0.2532		66.3%	29-101		
Hexachloroethane	0.084			0.025	"	0.1266		66.6%	31-94		
Nitrobenzene	0.097			0.025	"	0.1266		77.0%	33-111		
Hexachlorobutadiene	0.091			0.025	"	0.1266		71.6%	31-100		
2,4,6-Trichlorophenol	0.094			0.025	"	0.1266		74.0%	42-112		
2,4,5-Trichlorophenol	0.093			0.025	"	0.1266		73.6%	51-117		
2,4-Dinitrotoluene	0.11			0.025	"	0.1266		84.0%	63-128		
Hexachlorobenzene	0.11			0.025	"	0.1266		84.4%	55-122		
Pentachlorophenol	0.086			0.025	"	0.1266		67.6%	60-120		
Surrogate: Pyridine-d5	0.25				"	0.6329		38.7%	20-71		
Surrogate: 2-Fluorophenol	0.38				"	0.6329		60.2%	29-73		
Surrogate: Phenol-d5	0.33				"	0.6329		51.4%	22-62		
Surrogate: Nitrobenzene-d5	0.49				"	0.6329		78.0%	42-90		
Surrogate: 2-Fluorobiphenyl	0.52				"	0.6329		81.9%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.53				"	0.6329		83.4%	43-107		
Surrogate: Terphenyl-d14	0.59				"	0.6329		93.2%	59-111		

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Batch B17E049 - Solvent Extraction

Matrix Spike (B17E049-MS1)		Source: 1705002-05		Prepared: May-26-17		Analyzed: Jun-11-17					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.32			1.3	mg/L	0.6250	U	51.2%	32-68		
2-Methylphenol	0.49			0.25	"	0.6250	U	78.0%	26-107		
3+4-Methylphenol	0.84			0.50	"	1.250	U	67.0%	29-101		
Hexachloroethane	0.46			0.25	"	0.6250	U	74.4%	31-94		
Nitrobenzene	0.56			0.25	"	0.6250	U	89.2%	33-111		
Hexachlorobutadiene	0.54			0.25	"	0.6250	U	85.6%	31-100		
2,4,6-Trichlorophenol	0.51			0.25	"	0.6250	U	81.2%	42-112		
2,4,5-Trichlorophenol	0.39			0.25	"	0.6250	U	62.8%	51-117		
2,4-Dinitrotoluene	0.44			0.25	"	0.6250	U	70.4%	63-128		
Hexachlorobenzene	0.60			0.25	"	0.6250	U	95.2%	55-122		
Pentachlorophenol	U	UJ, (CCV)		0.25	"	0.6250	Rejected	%	60-120		
Surrogate: Pyridine-d5	0.31				"	0.6250		49.6%	20-71		
Surrogate: 2-Fluorophenol	0.43				"	0.6250		68.4%	29-73		
Surrogate: Phenol-d5	0.41	Q			"	0.6250		65.6%	22-62		
Surrogate: Nitrobenzene-d5	0.57	Q			"	0.6250		91.6%	42-90		
Surrogate: 2-Fluorobiphenyl	0.58				"	0.6250		92.8%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.49				"	0.6250		78.0%	43-107		
Surrogate: Terphenyl-d14	0.52				"	0.6250		83.6%	59-111		

Matrix Spike (B17E049-MS2)		Source: 1705004-08		Prepared: May-26-17		Analyzed: Jun-10-17					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.26			1.3	mg/L	0.6250	U	40.8%	32-68		
2-Methylphenol	0.46			0.25	"	0.6250	U	72.8%	26-107		
3+4-Methylphenol	1.6			0.50	"	1.250	0.74	71.8%	29-101		
Hexachloroethane	0.46			0.25	"	0.6250	U	72.8%	31-94		
Nitrobenzene	0.67			0.25	"	0.6250	U	107%	33-111		
Hexachlorobutadiene	0.50			0.25	"	0.6250	U	80.8%	31-100		
2,4,6-Trichlorophenol	0.44			0.25	"	0.6250	U	69.6%	42-112		
2,4,5-Trichlorophenol	0.47			0.25	"	0.6250	U	74.8%	51-117		
2,4-Dinitrotoluene	0.54			0.25	"	0.6250	U	87.2%	63-128		

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Batch B17E049 - Solvent Extraction

Matrix Spike (B17E049-MS2)		Source: 1705004-08		Prepared: May-26-17		Analyzed: Jun-10-17					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	0.55			0.25	mg/L	0.6250	U	88.4%	55-122		
Pentachlorophenol	0.38	Q		0.25	"	0.6250	0.14	36.8%	60-120		
Surrogate: Pyridine-d5	0.29				"	0.6250		46.4%	20-71		
Surrogate: 2-Fluorophenol	0.42				"	0.6250		67.2%	29-73		
Surrogate: Phenol-d5	0.28				"	0.6250		45.2%	22-62		
Surrogate: Nitrobenzene-d5	0.57	Q			"	0.6250		91.6%	42-90		
Surrogate: 2-Fluorobiphenyl	0.60	Q			"	0.6250		96.4%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.49				"	0.6250		78.8%	43-107		
Surrogate: Terphenyl-d14	0.58				"	0.6250		93.6%	59-111		

Matrix Spike Dup (B17E049-MSD1)		Source: 1705002-05		Prepared: May-26-17		Analyzed: Jun-11-17					
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.32	(IS)		1.3	mg/L	0.6250	U	50.4%	32-68	1.57	34
2-Methylphenol	0.48	(IS)		0.25	"	0.6250	U	76.0%	26-107	2.60	30
3+4-Methylphenol	0.86	(IS)		0.50	"	1.250	U	69.2%	29-101	3.23	30
Hexachloroethane	0.48	(IS)		0.25	"	0.6250	U	76.8%	31-94	3.17	30
Nitrobenzene	0.54	(IS)		0.25	"	0.6250	U	85.6%	33-111	4.12	32
Hexachlorobutadiene	0.58	(IS)		0.25	"	0.6250	U	93.2%	31-100	8.50	30
2,4,6-Trichlorophenol	0.50	(IS)		0.25	"	0.6250	U	80.8%	42-112	0.494	30
2,4,5-Trichlorophenol	0.47	(IS)		0.25	"	0.6250	U	74.8%	51-117	17.4	30
2,4-Dinitrotoluene	0.43	(IS)		0.25	"	0.6250	U	69.2%	63-128	1.72	30
Hexachlorobenzene	0.62	(IS)		0.25	"	0.6250	U	98.8%	55-122	3.71	30
Pentachlorophenol	U	(CCV), (IS), UJ		0.25	"	0.6250	Rejected	%	60-120		30
Surrogate: Pyridine-d5	0.28	(IS)			"	0.6250		45.2%	20-71		
Surrogate: 2-Fluorophenol	0.55	(IS), Q			"	0.6250		87.6%	29-73		
Surrogate: Phenol-d5	0.47	(IS), Q			"	0.6250		75.6%	22-62		
Surrogate: Nitrobenzene-d5	0.59	(IS), Q			"	0.6250		94.0%	42-90		
Surrogate: 2-Fluorobiphenyl	0.62	(IS), Q			"	0.6250		98.8%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.52	(IS)			"	0.6250		84.0%	43-107		
Surrogate: Terphenyl-d14	0.60	(IS)			"	0.6250		95.6%	59-111		

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Batch B17E049 - Solvent Extraction

Matrix Spike Dup (B17E049-MSD2) Source: 1705004-08 Prepared: May-26-17 Analyzed: Jun-10-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	0.29			1.3	mg/L	0.6250	U	46.0%	32-68	12.0	34
2-Methylphenol	0.42			0.25	"	0.6250	U	67.2%	26-107	8.00	30
3+4-Methylphenol	1.6			0.50	"	1.250	0.74	72.8%	29-101	0.763	30
Hexachloroethane	0.46			0.25	"	0.6250	U	73.2%	31-94	0.548	30
Nitrobenzene	1.0	Q		0.25	"	0.6250	U	162%	33-111	41.3	32
Hexachlorobutadiene	0.50			0.25	"	0.6250	U	80.8%	31-100	0.00	30
2,4,6-Trichlorophenol	0.49			0.25	"	0.6250	U	78.8%	42-112	12.4	30
2,4,5-Trichlorophenol	0.40			0.25	"	0.6250	U	64.0%	51-117	15.6	30
2,4-Dinitrotoluene	0.56			0.25	"	0.6250	U	90.0%	63-128	3.16	30
Hexachlorobenzene	0.52			0.25	"	0.6250	U	84.0%	55-122	5.10	30
Pentachlorophenol	0.35	Q		0.25	"	0.6250	0.14	32.4%	60-120	7.61	30
Surrogate: Pyridine-d5	0.32				"	0.6250		51.6%	20-71		
Surrogate: 2-Fluorophenol	0.45				"	0.6250		72.4%	29-73		
Surrogate: Phenol-d5	0.34				"	0.6250		54.4%	22-62		
Surrogate: Nitrobenzene-d5	0.61	Q			"	0.6250		97.6%	42-90		
Surrogate: 2-Fluorobiphenyl	0.58				"	0.6250		92.8%	40-93		
Surrogate: 2,4,6-Tribromophenol	0.43				"	0.6250		68.4%	43-107		
Surrogate: Terphenyl-d14	0.57				"	0.6250		91.2%	59-111		

Batch B17F036 - EPA 3580A solvent dilution

Blank (B17F036-BLK1) Prepared: Jun-08-17 Analyzed: Jun-10-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			100	mg/L						
2-Methylphenol	U			100	"						
3+4-Methylphenol	U			200	"						
Hexachloroethane	U			100	"						
Nitrobenzene	U			100	"						
Hexachlorobutadiene	U			100	"						
2,4,6-Trichlorophenol	U			100	"						
2,4,5-Trichlorophenol	U			100	"						

Batch B17F036 - EPA 3580A solvent dilution

Blank (B17F036-BLK1)

Prepared: Jun-08-17 Analyzed: Jun-10-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
2,4-Dinitrotoluene	U			100	mg/L						
Hexachlorobenzene	U			100	"						
Pentachlorophenol	U	(CCV), UJ		250	"						
Surrogate: Pyridine-d5	250				"	250.0		102%	70-130		
Surrogate: 2-Fluorophenol	260				"	250.0		106%	70-130		
Surrogate: Phenol-d5	260				"	250.0		104%	70-130		
Surrogate: Nitrobenzene-d5	240				"	250.0		98.0%	70-130		
Surrogate: 2-Fluorobiphenyl	240				"	250.0		96.4%	70-130		
Surrogate: 2,4,6-Tribromophenol	230				"	250.0		91.6%	70-130		
Surrogate: Terphenyl-d14	230				"	250.0		91.2%	70-130		

Blank (B17F036-BLK2)

Prepared: Jun-08-17 Analyzed: Jun-10-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	U			100	mg/L						
2-Methylphenol	U			100	"						
3+4-Methylphenol	U			200	"						
Hexachloroethane	U			100	"						
Nitrobenzene	U			100	"						
Hexachlorobutadiene	U			100	"						
2,4,6-Trichlorophenol	U			100	"						
2,4,5-Trichlorophenol	U			100	"						
2,4-Dinitrotoluene	U			100	"						
Hexachlorobenzene	U			100	"						
Pentachlorophenol	U	(CCV), UJ		250	"						
Surrogate: Pyridine-d5	260				"	250.0		103%	70-130		
Surrogate: 2-Fluorophenol	250				"	250.0		100%	70-130		
Surrogate: Phenol-d5	250				"	250.0		101%	70-130		
Surrogate: Nitrobenzene-d5	240				"	250.0		96.8%	70-130		
Surrogate: 2-Fluorobiphenyl	240				"	250.0		97.6%	70-130		
Surrogate: 2,4,6-Tribromophenol	210				"	250.0		83.2%	70-130		
Surrogate: Terphenyl-d14	230				"	250.0		91.6%	70-130		

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Batch B17F036 - EPA 3580A solvent dilution

LCS (B17F036-BS1)

Prepared: Jun-08-17 Analyzed: Jun-11-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	250			99	mg/L	247.5		100%	70-130		
2-Methylphenol	250			99	"	247.5		103%	70-130		
3+4-Methylphenol	490			200	"	495.0		98.4%	70-130		
Hexachloroethane	240			99	"	247.5		98.8%	70-130		
Nitrobenzene	250			99	"	247.5		99.6%	70-130		
Hexachlorobutadiene	240			99	"	247.5		97.6%	70-130		
2,4,6-Trichlorophenol	240			99	"	247.5		96.4%	70-130		
2,4,5-Trichlorophenol	220			99	"	247.5		90.4%	70-130		
2,4-Dinitrotoluene	240			99	"	247.5		96.0%	70-130		
Hexachlorobenzene	250			99	"	247.5		99.6%	70-130		
Pentachlorophenol	82	(CCV), I, Q		250	"	247.5		33.2%	70-130		
Surrogate: Pyridine-d5	270				"	247.5		108%	70-130		
Surrogate: 2-Fluorophenol	260				"	247.5		105%	70-130		
Surrogate: Phenol-d5	280				"	247.5		113%	70-130		
Surrogate: Nitrobenzene-d5	250				"	247.5		101%	70-130		
Surrogate: 2-Fluorobiphenyl	240				"	247.5		97.2%	70-130		
Surrogate: 2,4,6-Tribromophenol	200				"	247.5		82.8%	70-130		
Surrogate: Terphenyl-d14	240				"	247.5		95.2%	70-130		

LCS Dup (B17F036-BSD1)

Prepared: Jun-08-17 Analyzed: Jun-11-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	260			100	mg/L	250.0		103%	70-130	3.76	30
2-Methylphenol	270			100	"	250.0		109%	70-130	7.03	30
3+4-Methylphenol	520			200	"	500.0		104%	70-130	6.91	30
Hexachloroethane	260			100	"	250.0		104%	70-130	6.12	30
Nitrobenzene	260			100	"	250.0		105%	70-130	6.46	30
Hexachlorobutadiene	260			100	"	250.0		103%	70-130	6.57	30
2,4,6-Trichlorophenol	250			100	"	250.0		101%	70-130	5.46	30
2,4,5-Trichlorophenol	240			100	"	250.0		98.0%	70-130	9.06	30
2,4-Dinitrotoluene	260			100	"	250.0		103%	70-130	7.83	30

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Batch B17F036 - EPA 3580A solvent dilution

LCS Dup (B17F036-BSD1)

Prepared: Jun-08-17 Analyzed: Jun-11-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	270			100	mg/L	250.0		108%	70-130	8.72	30
Pentachlorophenol	74	(CCV), J, Q		250	"	250.0		29.6%	70-130	10.5	30
Surrogate: Pyridine-d5	260				"	250.0		104%	70-130		
Surrogate: 2-Fluorophenol	250				"	250.0		101%	70-130		
Surrogate: Phenol-d5	290				"	250.0		117%	70-130		
Surrogate: Nitrobenzene-d5	250				"	250.0		98.4%	70-130		
Surrogate: 2-Fluorobiphenyl	250				"	250.0		98.8%	70-130		
Surrogate: 2,4,6-Tribromophenol	200				"	250.0		78.8%	70-130		
Surrogate: Terphenyl-d14	250				"	250.0		98.4%	70-130		

MRL Check (B17F036-MRL2)

Prepared: Jun-08-17 Analyzed: Jun-10-17

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	49			99	mg/L	49.50		98.0%	70-130		
2-Methylphenol	48			99	"	49.50		96.0%	70-130		
3+4-Methylphenol	89			200	"	99.01		90.0%	70-130		
Hexachloroethane	49			99	"	49.50		98.0%	70-130		
Nitrobenzene	47			99	"	49.50		94.0%	70-130		
Hexachlorobutadiene	47			99	"	49.50		94.0%	70-130		
2,4,6-Trichlorophenol	43			99	"	49.50		86.0%	70-130		
2,4,5-Trichlorophenol	38			99	"	49.50		76.0%	70-130		
2,4-Dinitrotoluene	65	Q		99	"	49.50		132%	70-130		
Hexachlorobenzene	47			99	"	49.50		94.0%	70-130		
Pentachlorophenol	72	(CCV), J, Q		250	"	49.50		146%	70-130		
Surrogate: Pyridine-d5	260				"	247.5		106%	70-130		
Surrogate: 2-Fluorophenol	260				"	247.5		104%	70-130		
Surrogate: Phenol-d5	270				"	247.5		111%	70-130		
Surrogate: Nitrobenzene-d5	240				"	247.5		96.0%	70-130		
Surrogate: 2-Fluorobiphenyl	230				"	247.5		94.4%	70-130		
Surrogate: 2,4,6-Tribromophenol	210				"	247.5		86.4%	70-130		
Surrogate: Terphenyl-d14	230				"	247.5		93.2%	70-130		

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Batch B17F036 - EPA 3580A solvent dilution

Matrix Spike (B17F036-MS2)		Source: 1705002-08		Prepared: Jun-08-17 Analyzed: Jun-11-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	210			110	mg/L	264.8	U	80.8%	70-130		
2-Methylphenol	400			110	"	264.8	100	114%	70-130		
3+4-Methylphenol	570			210	"	529.7	U	108%	70-130		
Hexachloroethane	300			110	"	264.8	U	113%	70-130		
Nitrobenzene	270			110	"	264.8	U	103%	70-130		
Hexachlorobutadiene	310			110	"	264.8	U	119%	70-130		
2,4,6-Trichlorophenol	300			110	"	264.8	U	113%	70-130		
2,4,5-Trichlorophenol	280			110	"	264.8	U	104%	70-130		
2,4-Dinitrotoluene	290			110	"	264.8	U	110%	70-130		
Hexachlorobenzene	310			110	"	264.8	U	119%	70-130		
Pentachlorophenol	320	(CCV), J		260	"	264.8	U	120%	70-130		
Surrogate: Pyridine-d5	220				"	264.8		81.6%	70-130		
Surrogate: 2-Fluorophenol	260				"	264.8		98.8%	70-130		
Surrogate: Phenol-d5	260				"	264.8		100%	70-130		
Surrogate: Nitrobenzene-d5	290				"	264.8		108%	70-130		
Surrogate: 2-Fluorobiphenyl	280				"	264.8		106%	70-130		
Surrogate: 2,4,6-Tribromophenol	320				"	264.8		121%	70-130		
Surrogate: Terphenyl-d14	280				"	264.8		105%	70-130		

Matrix Spike (B17F036-MS3)		Source: 1705003-01		Prepared: Jun-08-17 Analyzed: Jun-11-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	280	(SURR)		110	mg/L	279.3	U	102%	70-130		
2-Methylphenol	310	(SURR)		110	"	279.3	U	109%	70-130		
3+4-Methylphenol	580	(SURR)		220	"	558.7	U	104%	70-130		
Hexachloroethane	270	(SURR)		110	"	279.3	U	96.8%	70-130		
Nitrobenzene	280	(SURR)		110	"	279.3	U	99.6%	70-130		
Hexachlorobutadiene	300	(SURR)		110	"	279.3	U	107%	70-130		
2,4,6-Trichlorophenol	470	(RES), (SURR), Q		110	"	279.3	U	168%	70-130		
2,4,5-Trichlorophenol	450	(RES), (SURR), Q		110	"	279.3	U	160%	70-130		
2,4-Dinitrotoluene	230	(SURR)		110	"	279.3	U	82.0%	70-130		

US EPA Region 5 Chicago Regional Laboratory

Batch B17F036 - EPA 3580A solvent dilution

Matrix Spike (B17F036-MS3)		Source: 1705003-01		Prepared: Jun-08-17 Analyzed: Jun-11-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	290	(SURR)		110	mg/L	279.3	U	104%	70-130		
Pentachlorophenol	U	(CCV), (SURR), J		280	"	279.3	Rejected	%	70-130		
Surrogate: Pyridine-d5	1800	Q			"	279.3		646%	70-130		
Surrogate: 2-Fluorophenol	1800	Q			"	279.3		635%	70-130		
Surrogate: Phenol-d5	2000	Q			"	279.3		714%	70-130		
Surrogate: Aniline-d5	2000	Q			"	279.3		707%	70-130		
Surrogate: Nitrobenzene-d5	1700	Q			"	279.3		596%	70-130		
Surrogate: 2-Fluorobiphenyl	1700	Q			"	279.3		606%	70-130		
Surrogate: 2,4,6-Tribromophenol	1000	Q			"	279.3		365%	70-130		
Surrogate: Terphenyl-d14	1700	Q			"	279.3		626%	70-130		

Matrix Spike Dup (B17F036-MSD1)		Source: 1705002-02		Prepared: Jun-08-17 Analyzed: Jun-11-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	220	Q		86	mg/L	215.5	U	102%	70-130	200	30
2-Methylphenol	290	Q		86	"	215.5	U	135%	70-130	200	30
3+4-Methylphenol	390	Q		170	"	431.0	U	90.8%	70-130	200	30
Hexachloroethane	200	Q		86	"	215.5	U	90.8%	70-130	200	30
Nitrobenzene	U	MI		86	"	215.5	Rejected	%	70-130		30
Hexachlorobutadiene	240	Q		86	"	215.5	U	112%	70-130	200	30
2,4,6-Trichlorophenol	240	Q		86	"	215.5	U	112%	70-130	200	30
2,4,5-Trichlorophenol	230	Q		86	"	215.5	U	108%	70-130	200	30
2,4-Dinitrotoluene	230	Q		86	"	215.5	U	108%	70-130	200	30
Hexachlorobenzene	230	Q		86	"	215.5	U	108%	70-130	200	30
Pentachlorophenol	110	(CCV), J, Q		220	"	215.5	U	51.6%	70-130	200	30
Surrogate: Pyridine-d5	210				"	215.5		98.0%	70-130		
Surrogate: 2-Fluorophenol	220				"	215.5		104%	70-130		
Surrogate: Phenol-d5	210				"	215.5		99.6%	70-130		
Surrogate: Nitrobenzene-d5	1400	MI, Q			"	215.5		651%	70-130		
Surrogate: 2-Fluorobiphenyl	220				"	215.5		102%	70-130		
Surrogate: 2,4,6-Tribromophenol	220				"	215.5		103%	70-130		
Surrogate: Terphenyl-d14	220				"	215.5		102%	70-130		

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Batch B17F036 - EPA 3580A solvent dilution

Matrix Spike Dup (B17F036-MSD2)		Source: 1705002-08		Prepared: Jun-08-17 Analyzed: Jun-11-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	210			110	mg/L	267.4	U	77.2%	70-130	3.60	30
2-Methylphenol	390			110	"	267.4	100	108%	70-130	3.63	30
3+4-Methylphenol	570			210	"	534.8	U	107%	70-130	0.347	30
Hexachloroethane	300			110	"	267.4	U	110%	70-130	1.55	30
Nitrobenzene	270			110	"	267.4	U	102%	70-130	0.568	30
Hexachlorobutadiene	290			110	"	267.4	U	110%	70-130	7.10	30
2,4,6-Trichlorophenol	300			110	"	267.4	U	113%	70-130	0.958	30
2,4,5-Trichlorophenol	280			110	"	267.4	U	104%	70-130	0.958	30
2,4-Dinitrotoluene	300			110	"	267.4	U	114%	70-130	4.17	30
Hexachlorobenzene	300			110	"	267.4	U	111%	70-130	6.01	30
Pentachlorophenol	290	(CCV), J		270	"	267.4	U	108%	70-130	9.90	30
Surrogate: Pyridine-d5	210				"	267.4		77.6%	70-130		
Surrogate: 2-Fluorophenol	270				"	267.4		100%	70-130		
Surrogate: Phenol-d5	270				"	267.4		100%	70-130		
Surrogate: Nitrobenzene-d5	280				"	267.4		108%	70-130		
Surrogate: 2-Fluorobiphenyl	280				"	267.4		103%	70-130		
Surrogate: 2,4,6-Tribromophenol	320				"	267.4		118%	70-130		
Surrogate: Terphenyl-d14	280				"	267.4		106%	70-130		

Matrix Spike Dup (B17F036-MSD3)		Source: 1705003-01		Prepared: Jun-08-17 Analyzed: Jun-12-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Pyridine	310			110	mg/L	285.1	U	109%	70-130	8.85	30
2-Methylphenol	300			110	"	285.1	U	106%	70-130	0.566	30
3+4-Methylphenol	600			230	"	570.1	U	106%	70-130	3.56	30
Hexachloroethane	300			110	"	285.1	U	106%	70-130	11.1	30
Nitrobenzene	320			110	"	285.1	U	113%	70-130	14.8	30
Hexachlorobutadiene	310			110	"	285.1	U	109%	70-130	3.51	30
2,4,6-Trichlorophenol	420	(RES), Q		110	"	285.1	U	146%	70-130	12.5	30
2,4,5-Trichlorophenol	450	(RES), Q		110	"	285.1	U	160%	70-130	1.78	30
2,4-Dinitrotoluene	220			110	"	285.1	U	77.2%	70-130	4.00	30

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Batch B17F036 - EPA 3580A solvent dilution

Matrix Spike Dup (B17F036-MSD3)		Source: 1705003-01		Prepared: Jun-08-17 Analyzed: Jun-12-17							
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	300			110	mg/L	285.1	U	106%	70-130	3.55	30
Pentachlorophenol	U	(CCV), J		290	"	285.1	Rejected	%	70-130		30
Surrogate: Pyridine-d5	280				"	285.1		97.2%	70-130		
Surrogate: 2-Fluorophenol	300				"	285.1		106%	70-130		
Surrogate: Phenol-d5	330				"	285.1		115%	70-130		
Surrogate: Nitrobenzene-d5	290				"	285.1		100%	70-130		
Surrogate: 2-Fluorobiphenyl	290				"	285.1		102%	70-130		
Surrogate: 2,4,6-Tribromophenol	180	Q			"	285.1		64.8%	70-130		
Surrogate: Terphenyl-d14	280				"	285.1		99.2%	70-130		

UJ The analyte was not detected at or above the reported limit. The reported limit is an estimate.

R Rejected

MI Matrix interference

J The identification of the analyte is acceptable; the reported value is an estimate.

(TF) Tailing factor criteria not met, which may affect measurement of this analyte

(SURR) Associated surrogate recovery criteria not met for this analyte

(RL) RL verification criteria not met for this analyte.

(RES) Resolution criteria for isomer peaks not met for this analyte.

(MS) Matrix spike recovery criteria not met for this analyte

(LCS) Blank spike recovery criteria not met for this analyte

(IS) Internal standard criteria not met for this analyte

(H) Holding time exceeded for sample preparation and/or analysis; Target analyte concentrations and/or reporting limits may not be accurate

(CCV) Continuing calibration verification criteria not met for this analyte

U Not Detected

NR Not Reported

Q QC limit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025 Certificate # L2280 Testing

Date: 7/18/2017
Subject: Review of Region 5 Data for Mid America Steel Drum, Inc.
To: RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604
From: Colin Breslin, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 Guidance on Environmental Data Verification and Data Validation and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X [Signature] 7/18/2017

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: Mid America Steel Drum, Inc.

Data Coordinator and Date Transmitted

Analyses included in this report:

Hg TCLP CVAA

Hg TCLP CVAA



Environmental Protection Agency Region 5 Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

RCRA, LCD, US EPA Region 5
77 West Jackson Boulevard
Chicago IL, 60604

Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-18-17 07:17

Analysis Case Narrative

General Information

Samples for the analysis of total mercury in TCLP sample extracts by cold vapor atomic absorption (CVAA) were received at the Chicago Regional Laboratory (CRL) on May 5, 2017. The samples were assigned across three CRL work orders, which are reported together in this report. The samples met the preservation requirement upon receipt. The samples were analyzed within the 28 day hold time after TCLP extraction. The designated analyst, Colin Breslin, can be reached at 312-886-2912.

The samples were prepared and analyzed according to CRL SOP AIG044E Version #3 and CRL SOP AIG044D Version #5 (based on EPA 245.1/SW-846: 7470A). Samples that were amenable to the automated preparation and analysis procedure were analyzed by AIG044E Version #3. Samples that required dilution and manual preparation were analyzed by AIG044D Version #5.

Note: Supporting data are archived with work order 1705002.

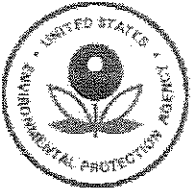
Sample Analysis and Results

The data reported herein meets the requirements of the CRL analytical SOP used for analysis and any laboratory specifications stated in the Land and Chemicals Division, Generic Quality Assurance Project Plan, dated April 19, 2017, for the site Mid-America Steel Drum, Inc. The QAPP is saved on the CRL share drive with file name: Mid America Steel Drum QAPP.pdf.

Sample results that required dilution are noted in the report as having a dilution greater than one. The dilution factors have already been applied to the final results and reporting limits.

Quality Control

All Quality Control (QC) audits were within CRL limits for the requested analytes or did not result in qualification of the data.



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Chicago Regional Laboratory

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Project: Mid America Steel Drum, Inc.
Project Number: MASD 05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-18-17 07:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OCS-01	1705002-01	Other	May-04-17 12:55	May-05-17 07:50
OCS-03	1705002-03	Other	May-04-17 13:35	May-05-17 07:50
OCS-05	1705002-05	Other	May-04-17 14:23	May-05-17 07:50
OCS-06	1705002-06	Other	May-04-17 14:37	May-05-17 07:50
OCS-07	1705002-07	Other	May-04-17 14:50	May-05-17 07:50
OCS-10	1705002-10	Other	May-04-17 15:20	May-05-17 07:50
OCS-10 DUP	1705002-11	Other	May-04-17 15:20	May-05-17 07:50
OCS-12	1705002-13	Other	May-04-17 15:50	May-05-17 07:50
CS-01	1705003-01	Other	May-04-17 11:48	May-05-17 07:50
CS-03	1705003-03	Other	May-04-17 12:35	May-05-17 07:50
CS-04	1705003-04	Other	May-04-17 13:02	May-05-17 07:50
CS-05	1705003-05	Other	May-04-17 13:12	May-05-17 07:50
CS-06	1705003-06	Other	May-04-17 13:29	May-05-17 07:50
CS-07	1705003-07	Other	May-04-17 13:55	May-05-17 07:50
CS-08	1705003-08	Other	May-04-17 14:15	May-05-17 07:50
SFS08	1705004-07	Other	May-04-17 15:10	May-05-17 07:50
SFS09	1705004-08	Other	May-04-17 15:23	May-05-17 07:50
SFS10	1705004-09	Other	May-04-17 15:37	May-05-17 07:50
SFS10 Dup	1705004-10	Other	May-04-17 15:37	May-05-17 07:50



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-18-17 07:17
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Mercury Cold Vapor, TCLP Extracts, EPA 245.1 US EPA Region 5 Chicago Regional Laboratory

OCS-01 (1705002-01)	Matrix: Other	Sampled: May-04-17 12:55	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17E047	Jun-01-17	Jun-01-17

OCS-03 (1705002-03)	Matrix: Other	Sampled: May-04-17 13:35	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			50.0	ug/L	100	B17E051	Jun-06-17	Jun-06-17

OCS-05 (1705002-05)	Matrix: Other	Sampled: May-04-17 14:23	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			5.0	ug/L	10	B17F010	Jun-08-17	Jun-09-17

OCS-06 (1705002-06)	Matrix: Other	Sampled: May-04-17 14:37	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			5.0	ug/L	10	B17F010	Jun-08-17	Jun-09-17

OCS-07 (1705002-07)	Matrix: Other	Sampled: May-04-17 14:50	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17E047	Jun-01-17	Jun-01-17

OCS-10 (1705002-10)	Matrix: Other	Sampled: May-04-17 15:20	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17F007	Jun-07-17	Jun-07-17

OCS-10 DUP (1705002-11)	Matrix: Other	Sampled: May-04-17 15:20	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17F007	Jun-07-17	Jun-07-17

OCS-12 (1705002-13)	Matrix: Other	Sampled: May-04-17 15:50	Received: May-05-17 07:50						
Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17F007	Jun-07-17	Jun-07-17



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-18-17 07:17
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Mercury Cold Vapor, TCLP Extracts, EPA 245.1 US EPA Region 5 Chicago Regional Laboratory

OCS-12 (1705002-13) Matrix: Other Sampled: May-04-17 15:50 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17E047	Jun-01-17	Jun-01-17

CS-01 (1705003-01) Matrix: Other Sampled: May-04-17 11:48 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			200	ug/L	400	B17E051	Jun-06-17	Jun-06-17

CS-03 (1705003-03) Matrix: Other Sampled: May-04-17 12:35 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			200	ug/L	400	B17E051	Jun-06-17	Jun-06-17

CS-04 (1705003-04) Matrix: Other Sampled: May-04-17 13:02 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			5.0	ug/L	10	B17E010	Jun-08-17	Jun-09-17

CS-05 (1705003-05) Matrix: Other Sampled: May-04-17 13:12 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			50.0	ug/L	100	B17E051	Jun-06-17	Jun-06-17

CS-06 (1705003-06) Matrix: Other Sampled: May-04-17 13:29 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			50.0	ug/L	100	B17E051	Jun-06-17	Jun-06-17

CS-07 (1705003-07) Matrix: Other Sampled: May-04-17 13:55 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17F007	Jun-07-17	Jun-07-17

CS-08 (1705003-08) Matrix: Other Sampled: May-04-17 14:15 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17F007	Jun-07-17	Jun-07-17

SFS08 (1705004-07) Matrix: Other Sampled: May-04-17 15:10 Received: May-05-17 07:50



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RCRA, LCD, US EPA Region 5 77 West Jackson Boulevard Chicago IL, 60604	Project: Mid America Steel Drum, Inc. Project Number: MASD-05-04-17 Project Manager: Jamie Paulin	Reported: Jul-18-17 07:17
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**Mercury Cold Vapor, TCLP Extracts, EPA 245.1
US EPA Region 5 Chicago Regional Laboratory**

SFS08 (1705004-07) Matrix: Other Sampled: May-04-17 15:10 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	21.2			5.0	ug/L	10	B17F010	Jun-08-17	Jun-09-17

SFS09 (1705004-08) Matrix: Other Sampled: May-04-17 15:23 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	76.2			5.0	ug/L	10	B17F010	Jun-08-17	Jun-09-17

SFS10 (1705004-09) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17E047	Jun-01-17	Jun-01-17

SFS10 Dup (1705004-10) Matrix: Other Sampled: May-04-17 15:37 Received: May-05-17 07:50

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Mercury	U			0.5	ug/L	1	B17E047	Jun-01-17	Jun-01-17



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Project: Mid America Steel Drum, Inc.
Project Number: MASD-05-04-17
Project Manager: Jamie Paulin

Reported:
Jul-18-17 07:17

Notes and Definitions

U Not Detected
NR Not Reported
Q QC limit Exceeded

