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: 7/20/2017

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

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

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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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

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SFS09	1705004-08	Other	May-04-17 15:23	May-05-17 07:50

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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

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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**

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Ignitability, Flash Point, EPA 1020B (modified)
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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
Ignitability by Flashpoint	**123**				Degrees F	1	B17E043	Jun-16-17	Jun-16-17

SFS02 (1705004-02) **Matrix: Other** **Sampled: May-04-17 13:20** **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

SFS03 (1705004-03) **Matrix: Other** **Sampled: May-04-17 13:31** **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	Jul-05-17	Jul-05-17

SFS04 (1705004-04) **Matrix: Other** **Sampled: May-04-17 13:39** **Received: May-05-17 07:50**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	**51**				Degrees F	1	B17E043	Jul-05-17	Jul-05-17

SFS06 (1705004-05) **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
Ignitability by Flashpoint	**51**				Degrees F	1	B17E043	Jul-05-17	Jul-05-17

SFS07 (1705004-06) **Matrix: Other** **Sampled: May-04-17 14:03** **Received: May-05-17 07:50**

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ignitability by Flashpoint	**61**				Degrees F	1	B17E043	Jul-05-17	Jul-05-17

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
Ignitability by Flashpoint	**No Flash**				Degrees F	1	B17G013	Jul-06-17	Jul-06-17

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
Ignitability by Flashpoint	**No Flash**				Degrees F	1	B17G013	Jul-06-17	Jul-06-17

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Notes and Definitions

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