Report of...

## **Compliance Emission Testing**

performed for...

# Plastic Plate, LLC. Kraft Avenue Plant Kentwood, Michigan

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# Chrome Etch Exhaust Stack

June 30, 2015

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Network Environmental, Inc. Grand Rapids, MI



#### **I. INTRODUCTION**

Network Environmental, Inc. was retained by Lacks Enterprises to perform Total Chromium (Cr) compliance emission sampling on the Chrome Etch (EUCHROMEETCH/SVK2) exhaust located at their Plastic Plate facility in Kentwood, Michigan. The purpose of the study was to quantify the Cr emissions from the exhaust to demonstrate compliance with Renewable Operating Permit MI-ROP-N7374-2015.

The sampling was performed by R. Scott Cargill and David D. Engelhardt of Network Environmental, Inc. on June 30, 2015 by employing U.S. EPA Method 306. Assisting in the study was Ms. Karen Baweja of Lacks Industries,

1

#### **II. PRESENTATION OF RESULTS**

#### II.1 TABLE 1 CHROMIUM (Cr) EMISSION RESULTS CHROME ETCH EXHAUST PLASIC PLATE, LLC KENTWOOD, MICHIGAN JUNE 30, 2015

Sample	Time	Air Flow Rate DSCFM <sup>(1)</sup>	Concentration Mg/M <sup>3(2)</sup>	Mass Emission Rate Lbs/Hr <sup>(3)</sup>
1	8:40-10:53	51,780	0.028	0,0055
2	11:26-13:33	51,744	0.026	0.0050
3	13:57-16:03	50,308	0.020	0.0038
	Average	51,277	0.025	0.0048

(1) DSCFM = Dry Standard Cubic Feet Per Minute (STP = 68°F & 29.92 in, Hg)

(2)  $Mg/M^3 = Milligrams$  Per Dry Standard Cubic Meter

(3) Lbs/Hr = Pounds Per Hour

#### **III. DISCUSSION OF RESULTS**

The Cr emission results are presented in Table 1 (Section II.1).

The Total Chromium emission limits for this source is: Chrome Etch = 0.0032 Lbs/Hr and 0.016 Mg/DSCM

#### **IV. SAMPLING AND ANALYTICAL PROTOCOL**

The sampling location for the Chrome Etch was on the sixty (60) inch I.D. exhaust stack at a location which met the optimal test location requirements of U.S. EPA Reference Method 1, Twelve (12) sampling points total were used for the testing (6 points per port). The points are as follows:

Point #	Point Location (Inches)
$1$ , $\mathbf$	2.64
2	8.76
3	17.76
4	42.24
5	51.24
6	57.36

**IV.1 Chromium (Cr)** - The sampling was performed in accordance with U.S. EPA Reference Method 306. Three (3) samples, each 120 minutes in duration, were collected from the exhaust. The samples were collected isokinetically in a 0.1N Sodium Bicarbonate solution as outlined in the method. The samples were analyzed for total chromium (Cr) by ICP - MS. All the quality assurance and quality control procedures listed in the method were incorporated in the sampling and analysis.

A diagram of the sampling train can be seen in Figure 1.

**IV.2 Exhaust Gas Parameters** - In addition to the Cr sampling, the exhaust gas parameters (air flow rate, temperature, moisture, and density) were determined by employing U.S. EPA Reference Methods 1 through 4. All the quality control and quality assurance requirements listed in the methods were incorporated in the sampling and analysis.

4

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