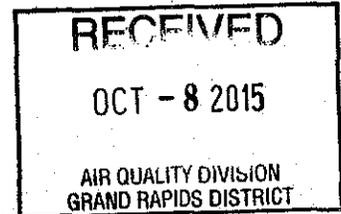


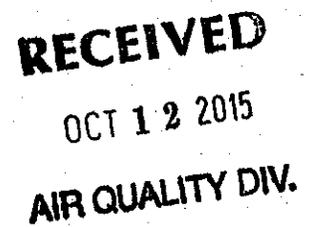
Report of...

# Compliance Emission Testing

performed for...



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



on the

## Chrome Etch Exhaust

August 26, 2015

021.26

Network Environmental, Inc.  
Grand Rapids, MI

**RECEIVED**

OCT 12 2015

**AIR QUALITY DIV.**

**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 Richard D. Eerdmans of Network Environmental, Inc. on August 26, 2015 by employing U.S. EPA Method 306. Assisting in the study was Ms. Karen Baweja and Mr. Phil Schneider of Lacks Industries. Ms. April Lazzaro and Mr. Tom Gasloli of the MDEQ were present to observe the testing and source operation.

## II. PRESENTATION OF RESULTS

**II.1 TABLE 1  
CHROMIUM (Cr) EMISSION RESULTS  
CHROME ETCH EXHAUST  
PLASIC PLATE, LLC  
KENTWOOD, MICHIGAN  
AUGUST 26, 2015**

Sample	Time	Air Flow Rate DSCFM <sup>(1)</sup>	Concentration Mg/M <sup>3</sup> (2)	Mass Emission Rate Lbs/Hr <sup>(3)</sup>
1	10:05-12:08	56,738	0.0075	0.0016
2	12:30-14:32	56,288	0.0074	0.0016
3	14:53-16:55	56,161	0.0012	0.0003
<b>Average</b>		<b>56,396</b>	<b>0.0054</b>	<b>0.0012</b>

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

(2) Mg/M<sup>3</sup> = 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:

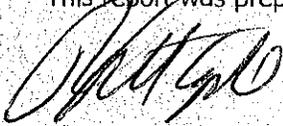
<b>Point #</b>	<b>Point Location (Inches)</b>
1	2.64
2	8.76
3	17.76
4	42.24
5	51.24
6	57.36

**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.

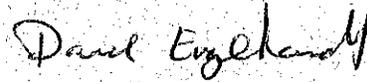
**IV.2 Exhaust Gas Parameters** - In addition to the Cr sampling, the exhaust gas parameters (air flow rate, temperature, moisture, and density) were determined by employing U.S. EPA Reference Methods 1 through 4. All the quality control and quality assurance requirements listed in the methods were incorporated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

This report was prepared by:



R. Scott Cargill  
Project Manager

This report was reviewed by:



David D. Engelhardt  
Vice President

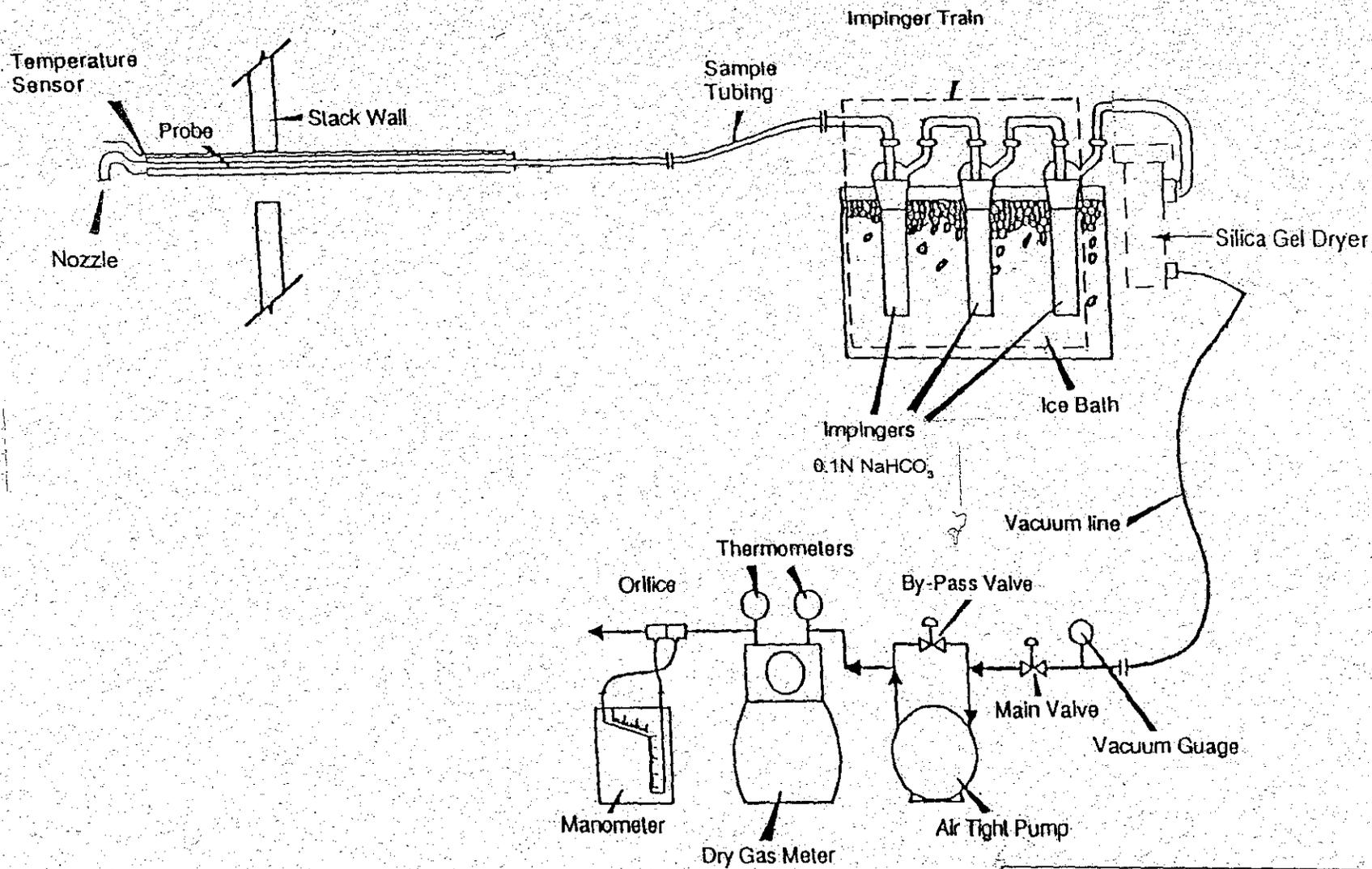


FIGURE 1

TOTAL CHROME SAMPLING TRAIN