

#### SOURCE TEST REPORT

17-339, 17-341 and 17-343

#### CONDUCTED AT

Weber Metals 16706 Garfield Avenue Paramount, CA 90723

#### HEXAVALENT CHROMIUM EMISSIONS FROM FURNACES NOS. 337 AND 339, AND PRESS AREA

TESTED:	June 1 and July 13, 2017
ISSUED:	September 1, 2017
REPORTED BY:	Jason Aspell Senior Air Quality Engineer

REVIEWED BY:

Michael Garibay Supervising Air Quality Engineer

SOURCE TEST ENGINEERING BRANCH

MONITORING & ANALYSIS DIVISION

Cleaning the air that we breathe ...

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -2- Date: <u>6/1/2017</u> and <u>7/13/2017</u>

### **TABLE OF CONTENTS**

<u>SECTION</u>	PAGE
SUMMARY	4
RESULTS	
Table 1: Hexavalent Chromium Emissions	5
Table 2: Furnace 337 Refractory Total Chromium	5
Table 3: Ambient Air Monitoring Data	6
Table 4: Mass Emission Rates	6
Executive Summary	7
INTRODUCTION	8
EQUIPMENT & PROCESS DESCRIPTION	9
Table 5: List of Permitted Furnaces	9
SAMPLING AND ANALYTICAL PROCEDURES	
Hexavalent Chromium Sampling (CARB Method 425)	10
Integrated Gas Sampling and Analysis	11
EPA Method 19	11
DISCUSSION/TEST CRITIQUE	12
FIGURES	
1) Facility and Ambient Monitor Locations	14
2) Location of Process Equipment and Source Testing	15
3) CARB Method 425 Train Diagram	16
4) SCAQMD Method 10.1	17
CALCULATIONS	18
APPENDICES	25
Appendix A: Compliance Staff Data	26
Appendix B: Field Data	29
Appendix C: District Laboratory Data	42
Appendix D: Discarded Field and Lab Data	63
Appendix E: Equipment Calibrations	69
Appendix F: Furnace Permits	76

Те	est Nos. <u>17-339, 17-341 and 17-343</u>	-3-	Date: 6/1/2017 and 7/13/2017
<u>st</u>	JMMARY		
a.	Firm	<u>Weber Metals</u> ,	Inc
b.	Test Location	16706 Garfield <u>Paramount, CA</u>	
c.	Units Tested	<u>Furnaces #337 a</u>	and # 339, and Press Area
d.	Test Requested by		PhD, Deputy Executive Officer 9) 396-3249
e.	Reason for Test Request	<u>High ambient a</u>	ir monitor readings of Cr (VI)
f.	Date of Tests	<u>June 1, 2017 an</u>	d July 13, 2017
g.	Source Tests Performed by		Vayne Stredwick c Padilla
h.	Test Arrangements Made Through		(Vice President) Inc (562) 602-0260 ext. 259
i.	Source Tests Observed by	Malinda Miller	e, Weber Metals, Inc. , Weber Metals, Inc. amboll-Environ
j.	Company I.D. No	<u>10966</u>	
	Permit No.		)157 (Furnace No. 337) )158 (Furnace No. 339)

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-4-

Date(s): 6/1/2017 and 7/13/2017

#### **RESULTS**

#### **Summary of Test Conditions:**

On June 1, 2017, the exhaust of Furnace No. 337 was source tested, in addition to an ambient air sample taken in the area of three presses in operation. High levels of hexavalent chromium were measured from Furnace No. 337. A subsequent source test was conducted on July 13, 2017 on the two exhaust stacks of Furnace No. 339, which showed low hexavalent chromium emissions. During the source tests, both Furnace No. 337 and No. 339 were preheating titanium billets at an operating temperature of 1725-1746°F. The results of the source tests and are presented in Table 1 below. As with previous source testing efforts at other facilities in Paramount, hexavalent chromium emissions have shown to be highly variable from furnace to furnace.

Furnace No. 337 is a rotary type furnace that contains an internal 26 ft. diameter stainless steel table to rotate parts horizontally through the furnace. Although the titanium parts processed were not expected to have significant amounts of chromium, the stainless steel rotating table is a potentially large source of chromium. In addition, during a previous source test visit on May 11, 2017, SCAQMD Compliance staff detected high levels of chromium in the refractory inside Furnace 337 with a handheld X-Ray Fluorescence (XRF) analyzer (Table 2). These components may also contribute to the hexavalent chromium emissions. Due to the nature and configuration of the process, testing was performed as a screening test, non-isokinetically.

Furnace No. 339 is similar in operation to Furnace No. 337 in regards to titanium parts processed and operating temperature, except that Furnace No. 339 does not have the stainless steel rotary table. The furnace refractory is still considered a potential hexavalent chromium source. Information requests regarding the refractory were not answered by the facility.

Seven ambient air monitors are located in close proximity to the facility. Table 3 contains nearby ambient air monitor results for the four ambient sampling days preceding the test dates.

Both furnaces have dedicated natural gas meters and readings were taken during the sampling. EPA Method 19 calculations were used to obtain exhaust flow rates and mass emission rates from the natural gas readings (Table 4). Since Furnace 339 has two exhaust stacks, the exhaust flow rate was assumed equal between the exhaust stacks based on data obtained from SCAQMD Source Test ID PR14194.

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-5-

#### **Results:**

Emissions Source	Date	Concentration (ng/m <sup>3</sup> )*
Furnace No. 337	6/1/17	24,500
Ambient - Furnace/Press Area	6/1/17	10.3
Furnace No. 339- West Stack	7/13/17	non-detect
East Stack	7/13/17	7.04

#### Table 1. Hexavalent Chromium Emission Concentrations

\* Concentrations reported in the same units as the ambient air monitoring data in Table 3

### Table 2. Furnace No 337 SCAQMD XRF Total Chromium Measurements\* (May 12, 2017)

Location	Concentration (ppm)
Refractory on furnace doorway floor	$818 \pm 28$
Brick on furnace doorway ceiling	$2910\pm45$
Ceramic fiber insulation wall inside furnace	$5007 \pm 60$
Burner tunnel refractory	$3468 \pm 47$

\* Qualitative readings taken by A.Q. Inspector A. Soltani. For further information refer to in Appendix A

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-6-

Date(s): 6/1/2017 and 7/13/2017

	Monitor No.								
Date	19	21	23	24	27	31+	32+		
5/22/17	1.31	0.28	1.44	Invalid	1.23	-	-		
5/25/17	0.90	0.68	1.09	1.76	0.78	-	-		
5/28/17	0.08	0.32	0.10	0.10	2.31	-	-		
5/31/17	0.3	0.7	1.43	0.67	1.09	-	-		
7/3/17	0.14	0.14	2.90	0.43	0.23	2.07	0.21		
7/6/17	0.94	0.36	0.84	1.54	0.25	0.41	0.88		
7/9/17	1.25	1.87	0.22	1.75	0.62	3.44	3.21		
7/12/17	2.87	1.26	0.86	2.90	7.66	1.41	2.99		

#### Table 3. Ambient Air Monitoring Data for Hexavalent Chromium (ng/m<sup>3</sup>)\*

 \* SCAQMD Multiple Air Toxics Exposure Study (MATES IV) background levels of hexavalent chromium are about 0.06 ng/m<sup>3</sup>.

+ Monitor was not operational until June 2017.

Table 4. Hexavalent Chromium Mass Emission Rates (U.S. EF	A Method 19)
---	--------------

	Furnace No. 337	F	urnace No. 33	9
		West Stack <sup>+</sup>	East Stack <sup>+</sup>	Total
Natural gas usage (corrected)*, cfh	1,434	-	-	1,422
O <sub>2</sub> ,%	10.0	3.5	0.8	-
Exhaust Flow Rate, dscfm	419	121	121	242
Cr <sup>+6</sup> Mass Emission Rate (lb/hr)	3.84 x 10 <sup>-5</sup>	3.19 x 10 <sup>-9</sup>	0	3.19 x 10 <sup>-9</sup>

\* Readings and calculations are located in Calculations section.

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-7-

Date(s): 6/1/2017 and 7/13/2017

#### EXECUTIVE SUMMARY

Source testing was conducted to screen for emissions at Weber Metals to identify the specific causes of recent elevated ambient hexavalent chromium levels measured near to the facility. Furnace No. 337 and ambient air in the press area were tested on June 1, 2017, and Furnace No. 339 was tested on July 13, 2017, to determine if they were potential sources of the elevated ambient readings.

Notably, the hexavalent chromium emissions from Furnace No. 337 were 10,400 times the highest, recent ambient air monitoring reading prior to the test. The ambient concentrations at ground level in the press area were 4.4 times the highest, recent ambient air monitoring reading. Since the furnace was processing titanium parts, the hexavalent chromium emissions are potentially generated from the internal furnace components (e.g. refractory or stainless steel table). A similar furnace design was issued a Permit to Construct (Appl. No. 572372) in the facility's Title V Facility Permit and further investigation and testing is warranted prior to the issuance of a Permit to Operate.

Furnace No. 339 is similar to Furnace No. 337, and processes titanium at a temperature greater than 1700°F, however Furnace No. 339 does not have an internal rotary table and resulted in very low hexavalent chromium emissions. These test results cannot positively identify the internal furnace components that contribute to the emissions; however, the results do positively identify Furnace No. 337 as a high emitter of hexavalent chromium.

There was a high amount of particulate emissions generated from the press operations during the source testing visits as indicated by visual observation. High opacity visible emissions drifted upwards due to the convection currents and were observed to be consistently exiting the roof vent. The testing of the ambient air did not capture a good representation of these emissions because the majority of them drifted upwards towards the roof vent away from the ground level sampling. Source Test staff also observed these visible emissions at Weber Metals in the past while at neighboring facilities. Higher hexavalent chromium concentrations might be detected at the roof vent.

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-8-

Date(s): 6/1/2017 and 7/13/2017

### **INTRODUCTION**

On June 1, 2017, Engineers from the South Coast Air Quality Management District (SCAQMD) Source Test Engineering (STE) branch conducted source testing at Weber Metals, Inc. in Paramount, California. The purpose of the testing was to identify the specific causes of elevated ambient hexavalent chromium levels measured very near to the facility. The locations of these monitors are shown in Figure 1.

Previously, during a May 12, 2017 visit to the facility, SCAQMD Compliance staff detected the presence of chromium in the Furnace 337 refractory and insulation with a handheld XRF analyzer. (Table 2 and Appendix A). In addition, STE staff requested to perform ambient air sampling in the press area for two hours during the visit, but were not given sufficient time by the facility to perform adequate sampling to obtain a good representation of emissions in the press area. Therefore, the sampling results from May 12, 2017 were not valid, and sampling over a longer period was performed on June 1, 2017. The field data sheets from May 12, 2017 may be found in Appendix D.

Based on the information provided by SCAQMD Compliance staff, Furnace 337 was chosen to be source tested, in addition to sampling the ambient air near the presses for an appropriate sampling period of two hours. Furnace 337 was processing titanium parts during sampling. The closest press was processing aluminum, and the two further presses were processing titanium.

Sources whose emissions are screened as greater than that of the nearby ambient air monitors are considered potential contributors to the hexavalent chromium measured by the ambient air monitor, with those exhibiting the greater concentrations more positively identified as contributors.

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -9-

Date(s): 6/1/2017 and 7/13/2017

#### EQUIPMENT AND PROCESS DESCRIPTION

Weber Metals, Inc. forges aluminum and titanium parts with open die (hand forging) and close die (die forging). In aluminum forging operation, stock is preheated to 750 deg. F before being shaped under pressure in the presses. For titanium forging operations, the stock is preheated to 1750 deg. F prior to being shaped in the presses to meet specific product parameters. Grinding is carried out to remove imperfections and to finish the product cycle.

Furnaces and presses are arranged so that heated parts may be removed at their appropriate temperature and shaped in an expedient manner. Testing was performed on one of the titanium furnaces and the ambient air near the furnaces and presses. The furnace tested, Furnace No. 337, currently operates under a Permit to Operate No. G40157. Weber also has Permits to Construct for an Abrasive Blasting Operation, an Aluminum Pre-Heat Furnace, two steel die furnaces and a second larger rotary furnace (Application No. 572372), that is yet to be constructed. A press was also installed recently but is exempt under SCAQMD permit requirements. The titanium furnace is a rotary furnace design rated at 12 MMBtu/hr that has a circular stainless steel table that rotates titanium parts through the furnace during preheating. A list of the permitted furnaces at this facility is provided in Table 5 below as provided by the current SCAQMD permit engineer.

Application No.	Permit No.	Equipment Description	Rating	Used for:
569424	G40161	Lindberg chain pre-heat furnace	3 MMBtu/hr	Aluminum Billets
572370		Chain conveyor preheat furnace	13 MMBtu/hr	Aluminum Billets
572372		Rotary pre-heat furnace	22 MMBtu/hr	Titanium Billets
572373		Pedestal die heating furnace #1	8 MMBtu/hr	Steel Dies
572374		Pedestal die heating furnace #2	8 MMBtu/hr	Steel Dies
580275		Nutec bickley pre-heat furnace (OVE-340)	4 MMBtu/hr	Steel Dies
580276	G40154	No. 1 box pre-heat furnace	6.4 MMBtu/hr	Al. & Ti. Billets
580277	G40156	No. 2 box pre-heat furnace	6.4 MMBtu/hr	Al. & Ti. Billets
580278	G40157	Rotary hearth pre-heat furnace (OVE-337) *	12 MMBtu/hr	Titanium Billets
580279	G40158	Thorpe technology pre-heat furnace (OVE-339)*	8.54 MMBtu/hr	Al. & Ti. Billets
580280	G40155	No. 2 car bottom pre-heat furnace	10 MMBtu/hr	Steel Dies
580282	G40160	Aov pedestal pre-heat furnace	4 MMBtu/hr	Steel Dies
580283	G40162	A & A pre-heat furnace	4 MMBtu/hr	Titanium Billets

#### **Table 5. List of Permitted Furnaces**

\*Units source tested

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -10-

Date(s): 6/1/2017 and 7/13/2017

#### SAMPLING AND ANALYTICAL PROCEDURES

Three sampling trains were utilized during testing. Train #40 was used for the testing of Furnace No. 337, Train #39 was used for the press area, and Train #38 was used as a field blank sample.

Although the furnace had sampling ports, sampling was performed by placing the opening of the quartz sampling probe about one inch inside the port. The furnace was under positive pressure (+0.03) so emissions were able to be collected from the configuration. Because of the small profile of the sampling port compared to the sampling probe, the testing was performed non-isokinetically.

The press area is largely enclosed, with a roof ridge vent above and a large door on the north side of the building that is kept open during operations. The roof ridge vent is designed to allow hot air inside the building to vent to the atmosphere. An aerial photo of the furnace and ridge vent locations is shown in Figure 2.

#### Hexavalent Chromium Sampling

Testing was conducted based on California Air Resources Board Method 425 applied to the furnace exhaust and the press area, with the procedures of the method specific to stack sampling omitted. Two samples were taken at single non-isokinetic sample points as described above for informational purposes. A third sampling train was used as a blank. Each sampling train consisted of a sampling line, which was used to draw the stack sample from the source. The furnace sample used a quartz probe and nozzle. The sample was then drawn through two impingers each filled with an aqueous solution of 0.1N NaHCO<sub>3</sub> (per Section 21.2), an empty impinger, a 2" filter, and an impinger bubbler filled with tared silica gel. Each sampling train was connected to a vacuum pump, a dry gas meter, and a calibrated orifice. The sampling apparatus was checked for leaks before and after sampling. The impingers were contained in an ice bath to condense water vapor and other condensable matter present in the sample stream (see Figure 3).

The samples were extracted using the sampling trains. The pH of the solution in the first impinger was measured after the test, but prior to recovery, at pH of at least 9 (the method requires a pH of 8.0 or higher). The impinger solutions were recovered within 24 hours and the SCAQMD laboratory analyzed the hexavalent chromium in the samples by CARB Method 425 and SCAQMD SOP 0046. Hexavalent chromium deposited in the filter, sample line and impingers were extracted and analyzed by an Ion Chromatograph equipped with a post-column reactor (IC/PCR) and a visible wavelength detector. Moisture content was determined gravimetrically and volumetrically. At the request of Weber, portions of the liquids extracted

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -11- Date(s): <u>6/1/2017 and 7/13/2017</u>

from the samples were provided for duplicate analyses. The duplicate analyses are not included in this test report.

#### Integrated Gas Sampling and Analysis

An integrated gas sample was collected from the exhaust stack during testing. The gas sampling apparatus consisted of a stainless steel probe, a Teflon line, and a 6-liter summa canister (Figure 4).

The samples were analyzed by the SCAQMD laboratory for carbon dioxide and oxygen. The gases were separated by gas chromatography. The carbon dioxide was determined by a gas chromatograph with a nickel catalyzed methanizer and flame ionization detector (GC/Ni-FID). Oxygen was analyzed by thermal conductivity.

#### EPA Method 19

Furnace No. 337 was equipped with a dedicated natural gas meter as required by permit conditions. Gas meter readings were recorded during the sampling period to determine the volume of natural gas combusted in the furnace during the test. The formulas in EPA Method 19 were used to derive post-combustion flow rate where diluent measurements are made, the exhaust is analyzed for oxygen, and fuel consumption is measured and recorded. Calculation of the emission flow rate using this procedure requires a test-specific F-factor and Btu value of the fuel being combusted, in this instance natural gas. Utilizing the Higher Heating Values and  $F_d$ -factors for natural gas, the exhaust rate was able to be determined. The exhaust rate was used with the measured concentrations to calculate emissions rates.

Test Nos. <u>17-339, 17-341 and 17-343</u> -12-

Date(s): 6/1/2017 and 7/13/2017

#### **DISCUSSION/TEST CRITIQUE**

For purposes of interpreting the test results, the background level of hexavalent chromium during the most recent SCAQMD Multiple Air Toxics Exposure Study (MATES) IV study was about 0.06 ng/m<sup>3</sup>. While the results are substantially higher than the background, it should be noted that it takes a significant volume of air at source concentrations substantially higher than the background to affect the ambient air levels. Ambient air levels measured at the monitors are also a function of distance away from the facility, due to air dilution, deposition, and meteorology. The intent of this test was to identify sources that are at least several times higher than the background levels to identify potential emissions sources and to provide a focus for potential remediation.

The highest ambient concentration adjacent to the facility was 2.31 ng/m<sup>3</sup> on 5/28/17 just a few days prior to the 6/1/17 test, as compared to the measured source concentrations from the facility, which were 24,500 ng/m<sup>3</sup> and 10.2 ng/m<sup>3</sup> for the Furnace No. 337 exhaust stack and the press area, respectively.

Furnace No. 337, as of the time of this report issue date, has the highest emission concentration of all furnaces tested by SCAQMD, and vents it emissions through roof vents that are upwind (prevailing southwest wind direction) from SCAQMD Monitoring Stations #19, 31, and others with elevated readings. The overall conclusion of this report is that elevated source concentrations from the Furnace No. 337 indicate that this furnace is emitting significant hexavalent chromium emissions into the atmosphere. Modeling of the reported hexavalent chromium emissions rate ( $3.84 \times x10^{-5}$  lb/hr) is recommended to more specifically quantify the significance for contribution to the nearby ambient monitoring readings and health risk to the surrounding area.

Despite the use of the single run screening approach, the use of an isokinetic and full triplicate test is not expected to change this conclusion due to the magnitude of emissions source increase over the ambient levels versus any potential variability in using a single run which is minimal. Additionally, the isokinetics were above 100%, which can only cause a low bias in the measured emissions assuring that the reported emissions are at least those that were reported.

The press area sample was diluted by incoming fresh air from a west-facing roll up door. Because of this, the press area sampling was not able to measure the undiluted emissions from the presses. The press results although not nearly as high as the furnace results, may actually be higher when sampled at a location above or closer to the presses.

Regardless of the hexavalent chromium emissions, a large amount of visible particulate matter (PM) emissions was observed from the presses. The PM emissions were caused by the use of water-based graphite containing die lubricants that were sprayed on the heated parts and dies

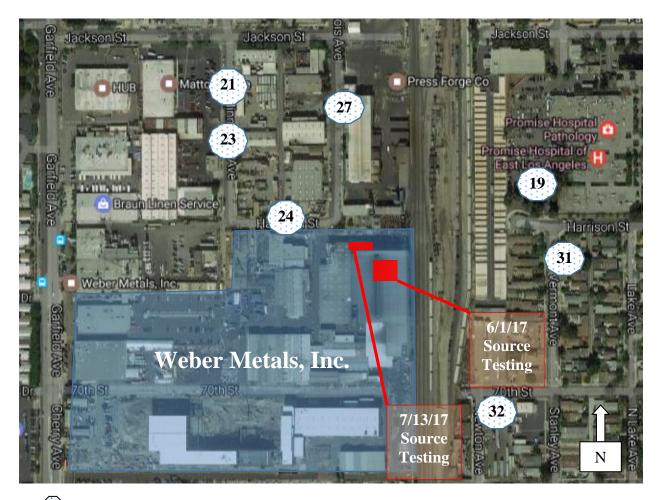
Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -13- Date(s): <u>6/1/2017 and 7/13/2017</u>

from the furnaces during the press phase of the forging operation. When sprayed onto the hot dies and parts, the heat from the dies and parts was observed to vaporize and/or partially combust the die lubricant creating visible PM emissions. The PM emissions were then observed to exit the forging building ridge vent. These visible emissions can be seen emitting from the ridge vent to intermittently and to varying degrees from outside the facility. As opposed to the furnace emissions, this report was inconclusive on whether the PM from the die lubricants is a significant contributor to the elevated ambient monitoring for hexavalent chromium.

During the furnace sampling, the sampling line (post impingers and filter) slipped off of the sampling train. For a period of a few seconds, air was pulled through by the pump through the dry gas meter, but not through the impingers and filter. The air volume was minimal and is not expected to impact the results of the test. In addition, since the air did not flow through the sampling train for these few seconds, the results would be biased low by a minimal amount. The silica impinger broke during leak testing of the field blank, so moisture gain could not be analyzed for the field blank. This also is not expected to significantly affect the results of the source test.

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -14-

Date(s): 6/1/2017 and 7/13/2017

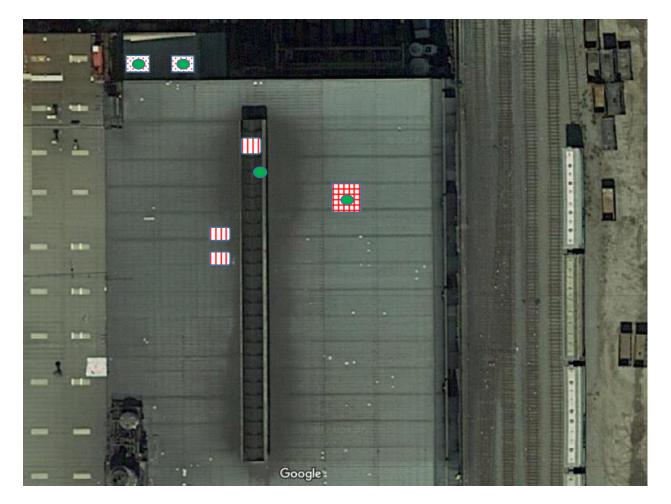


SCAQMD Ambient Air Monitors

Approximate location of SCAQMD Source Testing on June 1, 2017 and July 13, 2017 (further detailed in Figure 2)

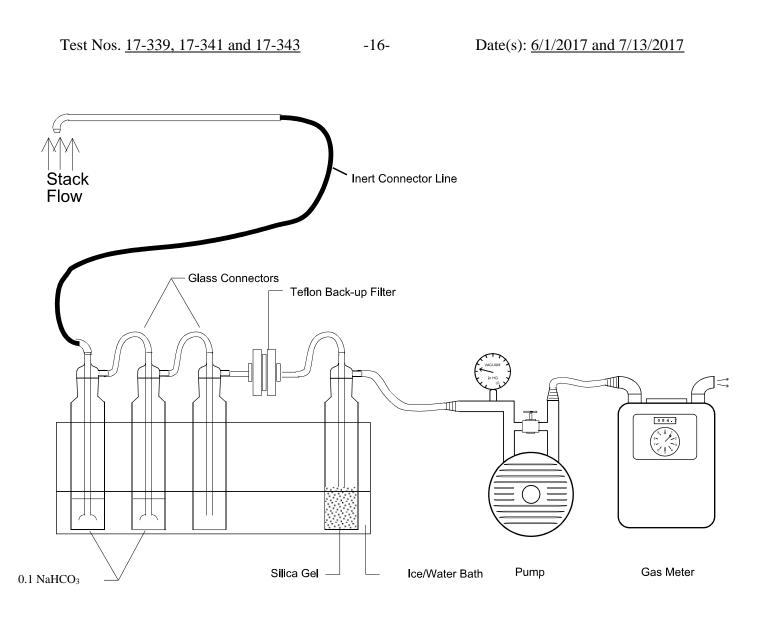
Figure 1: Facility and Ambient Monitor Locations

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -15 Date(s): <u>6/1/2017 and 7/13/2017</u>



- Press
- Furnace No. 337
- Furnace No. 339 (East and West Exhaust Stacks)
- SCAQMD Sampling Points

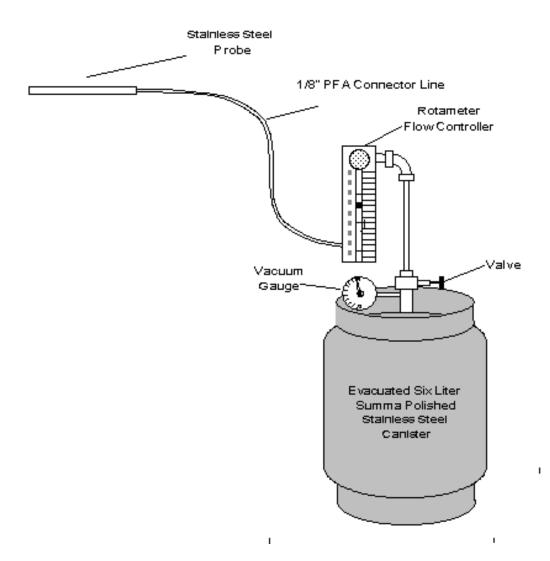
Figure 2: Location of Process Equipment and SCAQMD Source Testing



### Figure 3: CARB Method 425 Train Diagram

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -17-

Date(s): 6/1/2017 and 7/13/2017



#### Figure 4: SCAQMD Method 10.1

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -18 Date(s): <u>6/1/2017 and 7/13/2017</u>

### **CALCULATIONS**

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-19-

Date(s): 6/1/2017 and 7/13/2017

Test N	Test No. 2				Test Date: <sup>7</sup> 6/1/17					
		SOL	JRCE -	TEST	CALCULAT	FIONS				
Sampling Location: Sample Train:	Weber Metals-A 39	Ambient	Air- Pi	ress A	rea			Input by:	J. Aspell	
SUMMARY										
A. Average Traverse V										fps
A1. Average Traverse ' B. Gas Meter Tempera										fps dog E
C. Gas Meter Correction										иед г
D. Average Orifice Pre										"H20
E. Nozzle Diameter										inch
F1. Stack Diameter or	Dimension #1		inah			Correction	on Foota	or	0.04	
F2. Stack Diameter of			inch inch					JI		min
G. Stack Cross Sect. A	,		ft2		•	•				
H. Average Stack Tem			deg F	=						
I. Barometric Pressure		30.28	•							•
J. Gas Meter Pressure		30.50	•					sed		ml
K. Static Pressure			"H20							
L. Total Stack Pressure	e (I+(K/13.6))	30.28	"HgA							
T. Corrected Gas Volu	me [(S x J/29.92) >	c 520/(4	60+B)	x C					103.311	dscf
PERCENT MOISTURE	GAS DENSITY									
U. Percent Water Vap	or in Gas Sample (	(4.64 x	R)/((0.	.0464	x R) + T))				1.55	%
V. Average Molecular	Weight (Wet):									
Component		Fract.	x I	Moist.	Fract.	x	Mole	ecular Wt.	=	Wt./Mole
Water	0.015			1.000			18.0	,	0.28	
Carbon Dioxide	0.000 Dry	/ Basis		0.985			44.0	,	0.02	
Carbon Monoxide	0.000 Dry			0.985			28.0	,	0.00	
Oxygen	0.209 Dry			0.985			32.0	,	6.58	
Nitrogen & Inerts	0.791 Dry	Basis		0.985			28.2	,	21.95	
								, Sum	28.83	
FLOW RATE										
W. Gas Density Corre	ction Factor (28 OF	5/\/)^ 5							1.00	
X. Velocity Pressure C										
Y. Corrected Velocity	•	,								fps
YY. Vertical Corrected	· /									
Z. Flow Rate (Y x G x										cfm
ZZ. Vertical Flow Rate										cfm
AA. Flow Rate (Standa										scfm scfm
AA1. Vertical Flow Rat BB. Dry Flow Rate (AA										dscfm
BB1. Vertical Dry Flow										dscfm
SAMPLE CONCENTRA	ATION/EMISSION	RATE								
CC. Sample Cr+6 Cond	centration [0 01543		1						4.48E-09	ar/decf
DD. Sample Cr+6 Cond		. ,								•
EE. Sample Cr+6 Cond	•								1.03E-02	
GG. Sample CrT Conc										. 0
HH. Sample CrT Conce										
II. Sample CrT Concen	-								5.47E-02	

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-20-

Date(s): 6/1/2017 and 7/13/2017

		SOL	JRCE TEST	CALCULATIONS				
Sampling Location: Sample Train:	Weber Metals-I 40			st Stack			J. Aspell	
SUMMARY								
A. Average Traverse Vel A1. Average Traverse Ve	•							fps fps
B. Gas Meter Temperati								
C. Gas Meter Correction							-	
0. Average Orifice Press Nozzle Diameter								"H20 inch
1. Stack Diameter or D			inch	M. Pitot Correction				main
<ol> <li>Stack Dim #2 (blank</li> <li>Stack Cross Sect. Ar</li> </ol>		0.000	inch ft2	N. Sampling Time O. Nozzle X-Sect.				min ft
I. Average Stack Temp.		0.000	deg F	P. Net Cr <sup>+6</sup> Collect				
Barometric Pressure		30.28	"HgA	Q. Net Cr <sub>T</sub> Collec	tion		0.48029	mg
. Gas Meter Pressure (			"HgA	R. Water Vapor C				
. Static Pressure Total Stack Pressure			"H20 "HgA	S. Gas Volume M	letered.		81.984	dcf
. Corrected Gas Volum	ie [(S x J/29.92) >	x 520/(4	60+B) x C				78.717	dscf
ERCENT MOISTURE/0	GAS DENSITY							
. Percent Water Vapor	r in Gas Sample (	((4.64 x	R)/((0.0464	x R) + T))			12.48	%
. Average Molecular V	Veight (Wet):							
Component	Vol. F	Fract.	x Moist	Fract. x	Mala	cular Wt.	_	Wt./Mo
					woie			
/ater	0.125		1.000		18.0	,	2.25	
arbon Dioxide	0.057 Dry		1.000 0.875		18.0 44.0	, ,	2.25 2.19	
arbon Dioxide arbon Monoxide	0.057 Dry 0.000 Dry	/ Basis	1.000 0.875 0.875		18.0 44.0 28.0	, , ,	2.25 2.19 0.00	
Carbon Dioxide Carbon Monoxide Oxygen	0.057 Dry 0.000 Dry 0.100 Dry	/ Basis / Basis	1.000 0.875 0.875 0.875		18.0 44.0 28.0 32.0	, , , ,	2.25 2.19 0.00 2.80	
arbon Dioxide arbon Monoxide Dxygen	0.057 Dry 0.000 Dry	/ Basis / Basis	1.000 0.875 0.875		18.0 44.0 28.0	, , , , , ,	2.25 2.19 0.00	
Vater Carbon Dioxide Carbon Monoxide Dxygen Litrogen & Inerts	0.057 Dry 0.000 Dry 0.100 Dry	/ Basis / Basis	1.000 0.875 0.875 0.875		18.0 44.0 28.0 32.0	, , , , Sum	2.25 2.19 0.00 2.80	
arbon Dioxide arbon Monoxide Xygen litrogen & Inerts	0.057 Dry 0.000 Dry 0.100 Dry	/ Basis / Basis	1.000 0.875 0.875 0.875		18.0 44.0 28.0 32.0	, , , ,	2.25 2.19 0.00 2.80 20.80	
arbon Dioxide Carbon Monoxide Dxygen litrogen & Inerts	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry	/ Basis / Basis / Basis	1.000 0.875 0.875 0.875 0.875		18.0 44.0 28.0 32.0 28.2	, , , , Sum	2.25 2.19 0.00 2.80 20.80 28.05	
Carbon Dioxide Carbon Monoxide Dxygen Litrogen & Inerts LOW RATE V. Gas Density Correct V. Velocity Pressure Co	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.96 prrection Factor (2	/ Basis / Basis / Basis 5/V)^.5 29.92/L)	1.000 0.875 0.875 0.875 0.875		18.0 44.0 28.0 32.0 28.2	, , , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	
arbon Dioxide arbon Monoxide xygen itrogen & Inerts LOW RATE /. Gas Density Correct . Velocity Pressure Co . Corrected Velocity ( <i>F</i>	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.95 rrection Factor (2	/ Basis / Basis / Basis 5/V)^.5 29.92/L)	1.000 0.875 0.875 0.875 0.875		18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE V. Gas Density Correct Velocity Pressure Co Corrected Velocity (/ Y. Vertical Corrected <sup>1</sup>	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.95 prrection Factor (2 A x M x W x X) Velocity (A1 x M	/ Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X	1.000 0.875 0.875 0.875 0.875		18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 0.99	fps fps
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE V. Gas Density Correct . Velocity Pressure Co . Corrected Velocity (/ Y. Vertical Corrected V . Flow Rate (Y x G x 6	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.96 vrrection Factor (2 A x M x W x X) Velocity (A1 x M io)	/ Basis / Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X	1.000 0.875 0.875 0.875 0.875		18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps
Carbon Dioxide Carbon Monoxide Dxygen litrogen & Inerts LOW RATE V. Gas Density Correct V. Velocity Pressure Co Corrected Velocity (A Y. Vertical Corrector (A S. Flow Rate (Y x G x 6 Z. Vertical Flow Rate (	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.96 prrection Factor (2 A x M x W x X) Velocity (A1 x M 30)	/ Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X	1.000 0.875 0.875 0.875 0.875		18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps fps cfm
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE V. Gas Density Correct . Velocity Pressure Co . Corrected Velocity (/ Y. Vertical Corrected V . Flow Rate (Y x G x 6 Z. Vertical Flow Rate (Standard A. Flow Rate (Standard A. Iow Rate (Standard A. Iow Rate (Standard	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.95 prrection Factor (28.95 prrection Factor (28.95 prection Factor (28.95 prectio	/ Basis / Basis / Basis 5/V)^.5 29.92/L) 	1.000 0.875 0.875 0.875 0.875 0.875	60+H)]}	18.0 44.0 28.0 32.0 28.2	, , , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps fps cfm cfm scfm scfm scfm
arbon Dioxide arbon Monoxide xygen itrogen & Inerts LOW RATE /. Gas Density Correct . Velocity Pressure Co . Corrected Velocity ( <i>I</i> Y. Vertical Corrected <sup>1</sup> . Flow Rate (Y × G × 6 Z. Vertical Flow Rate (Standard A. Flow Rate (Standard A. Ivertical Flow Rate (A >	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.95 rrection Factor (2 A x M x W x X) Velocity (A1 x M 0) (YY x G x 60) d) {Z x (L/29.92) : (Standard) (ZZ x x (U/100))	/ Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X x [520/( c (L/29.9	1.000 0.875 0.875 0.875 0.875 0.875 	60+H)]}	18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps fps cfm cfm scfm scfm dscfm
arbon Dioxide arbon Monoxide xygen itrogen & Inerts LOW RATE /. Gas Density Correct . Velocity Pressure Co . Corrected Velocity (/ Y. Vertical Corrected ' Y. Vertical Corrected ' Z. Vertical Flow Rate (Xandard A. Flow Rate (Standard A. Iow Rate (Standard A. Vertical Flow Rate (A >	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.95 rrection Factor (2 A x M x W x X) Velocity (A1 x M 0) (YY x G x 60) d) {Z x (L/29.92) : (Standard) (ZZ x x (U/100))	/ Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X x [520/( c (L/29.9	1.000 0.875 0.875 0.875 0.875 0.875 	60+H)]}	18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps fps cfm cfm scfm scfm scfm
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE V. Gas Density Correct Velocity Pressure Co Corrected Velocity (/ Y. Vertical Corrected V Flow Rate (Y x G x 6 Z. Vertical Flow Rate (A A. Flow Rate (Standarc A1. Vertical Flow Rate (A B. Dry Flow Rate (AA x B1. Vertical Dry Flow F	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.96 rrrection Factor (2 A x M x W x X) Velocity (A1 x M 50)	/ Basis / Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X x [520/(4 c (L/29.9 00))	1.000 0.875 0.875 0.875 0.875 0.875 	60+H)]}	18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 . 1.02 . 0.99	fps fps cfm cfm scfm scfm dscfm
Carbon Dioxide Carbon Monoxide Daygen litrogen & Inerts LOW RATE V. Gas Density Correct Corrected Velocity (A Y. Vertical Corrected Y Y. Vertical Corrected Y Y. Vertical Flow Rate (A A. Flow Rate (Y x G x 6 Z. Vertical Flow Rate (A A. Flow Rate (Standard A1. Vertical Flow Rate (A B. Dry Flow Rate (AA x B1. Vertical Dry Flow Flow B1. Vertical Dry Flow Flow B1. Vertical Dry Flow Flow Concentration of the concent Concentration of the concentration of	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.99 prection Factor (2 A × M × W × X) Velocity (A1 × M 30) (YY × G × 60) (YZ × G × 60) (X + (L/29.92) : (Standard) (ZZ × × (U/100)) Rate (AA1 × (U/10 FION/EMISSION entration [0.01543]	/ Basis / Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X x [520/(4 c (L/29.9 00)) RATE 3 x (P/T)	1.000 0.875 0.875 0.875 0.875 0.875 	60+H)]}	18.0 44.0 28.0 32.0 28.2	, , , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 1.02 0.99 419 419 419	fps fps cfm cfm scfm dscfm dscfm dscfm
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE V. Gas Density Correct Velocity Pressure Co Corrected Velocity (A Y. Vertical Corrected V Corrected Velocity (A Y. Vertical Flow Rate (X A. Flow Rate (X andard A. Flow Rate (Standard A. Ivertical Flow Rate B. Dry Flow Rate (AA > B1. Vertical Dry Flow Flow B1. Vertical Dry Flow Flow AMPLE CONCENTRAT	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.841 A (28.95 0 (YY x G x 60) 0) {Z x (L/29.92) : (Standard) {ZZ x x (U/100) Rate (AA1 x (U/10 FION/EMISSION entration [0.01543 entration [54,1	/ Basis / Basis / Basis / Basis ///// 29.92/L) x W x X x [520/(4 x (L/29.9 00)) RATE 3 x (P/T) 51.996	1.000 0.875 0.875 0.875 0.875 0.875 	60+H)])	18.0 44.0 28.0 32.0 28.2	, , , , Sum	2.25 2.19 0.00 2.80 20.80 28.05	fps fps cfm scfm scfm dscfm dscfm dscfm
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE V. Gas Density Correct Velocity Pressure Co Corrected Velocity (A Y. Vertical Corrected Y Flow Rate (Y × G × 6 Z. Vertical Flow Rate (A A. Flow Rate (Standard A. Vertical Flow Rate (A A. Vertical Flow Rate (A A. Vertical Flow Rate (A A. Vertical Flow Rate (A A. Vertical Flow Rate (A B. Dry Flow Rate (AA ) B1. Vertical Dry Flow F AMPLE CONCENTRAT C. Sample Cr+6 Conce E. Sample Cr+6 Conce	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry tion Factor (28.96 prection Facto	/ Basis / Basis / Basis / Basis / Basis / Dasis ///////////////////////////////////	1.000 0.875 0.875 0.875 0.875 0.875 	60+H)]}	18.0 44.0 28.0 32.0 28.2	, , , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 1.02 0.99 419 419 419 1.07E-05 1.113E-02 2.45E+01	fps fps cfm cfm scfm dscfm dscfm dscfm f ppm µg/m <sup>3</sup>
arbon Dioxide arbon Monoxide bygen litrogen & Inerts LOW RATE /. Gas Density Correct . Velocity Pressure Co . Corrected Velocity (/ Y. Vertical Corrected ' . Flow Rate (Y x G x 6 Z. Vertical Flow Rate ( A. Flow Rate (Standard B. Dry Flow Rate (Aa ) B. Vertical Dry Flow F AMPLE CONCENTRAT C. Sample Cr+6 Conce E. Sample Cr+6 Conce F. Sample Emission Ra	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.843 Dry 0.840 Cr 0.840 Cr 0.840 Cr 0.840 Cr 0.900 Cr 0	/ Basis / Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X x [520/(4 c (L/29.9 00)) RATE 3 x (P/T) 51.996 798.9/0. 31 xCC).	1.000 0.875 0.875 0.875 0.875 0.875 0.875 	50+H)]}	18.0 44.0 28.0 32.0 28.2	, , , Sum	2.25 2.19 0.00 2.80 20.80 28.05 1.02 0.99 419 419 419 419 419 2.45E+01 3.84E-05	fps fps cfm cfm scfm dscfm dscfm dscfm gr/dscf ppm µg/m <sup>3</sup> ib/hr
Carbon Dioxide Carbon Monoxide Oxygen	0.057 Dry 0.000 Dry 0.100 Dry 0.843 Dry 0.843 Dry tion Factor (28.96 prrection Factor (2 A × M x W x X) Velocity (A1 x M 50)	/ Basis / Basis / Basis / Basis / Basis 5/V)^.5 29.92/L) x W x X x [520/(4 c (L/29.9 00)) RATE 3 x (P/T) 51.996 798.9/0. 31 xCC). x (Q/T)]	1.000 0.875 0.875 0.875 0.875 0.875 0.875 	50+H)]}	18.0 44.0 28.0 32.0 28.2	Sum	2.25 2.19 0.00 2.80 20.80 28.05 1.02 0.99 419 419 419 419 419 2.45E+01 3.84E-05 9.41E-05	fps fps cfm cfm scfm dscfm dscfm gr/dscf ppm µg/m <sup>3</sup> ib/hr gr/dscf

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-21-

Date(s): 6/1/2017 and 7/13/2017

Test No. 1				Test Date: 7/13/17					
		SOL	JRCE TEST	CALCULATIC	NS				
Sampling Location: Sample Train:	Weber Metals-F 15	Furnace	339- West E	xhaust Stack		Input by:	J. Aspell		
SUMMARY							_		
A. Average Traverse Velo								fps	
A1. Average Traverse Ver							#DIV/0!	fps	
3. Gas Meter Temperature								deg ⊦	
C. Gas Meter Correction F D. Average Orifice Pressu								"H20	
. Nozzle Diameter							2.00	inch	
-1. Stack Diameter or Dir	nension #1		inch	M Pitot Cor	rection Facto	r	0.84		
2. Stack Dim #2 (blank if					Time			min	
G. Stack Cross Sect. Area	,	0.000			Sect. Area				
I. Average Stack Temp			deg F	-	Collection				
Barometric Pressure			-		ollection			-	
			"HgA "Ll@A				0.0003	-	
. Gas Meter Pressure (I+ K. Static Pressure			"HgA "H20		por Condens me Metered				
Total Stack Pressure (H			"HgA	J. Gas volu			107.410	uu	
Corrected Gas Volume	[(S x J/29.92) x 5	520/(460	+B) x C				100.378	dscf	
PERCENT MOISTURE/G	AS DENSITY								
J. Percent Water Vapor i	n Gas Sample ((	4.64 x R)	/((0.0464 x F	२) + T))			16.86	%	
. Average Molecular We	eight (Wet):								
Component	Vol. Fr	act. x	Moist. Fra	ict. x	Molecular W	/t. =	Wt./Mole		
Vater	0.169		1.000	)	18.0		3.03		
Carbon Dioxide	0.090 Dr	y Basis	0.831		44.0	,	3.28		
Carbon Monoxide	0.000 Dr	y Basis	0.831		28.0	,	0.00		
Dxygen	0.035 Dr	y Basis	0.831		32.0	,	0.93		
litrogen & Inerts	0.875 Dr	y Basis	0.831		28.2	,	20.52		
						, Sum	27.77		
	E (00.05)						4.00		
V. Gas Density Correction	n Factor (28.95/	v /'`.5					1.02		
<ol> <li>Velocity Pressure Corr</li> <li>Corrected Velocity (A &gt;</li> </ol>		9.9∠/L)^.:					1.00 #DIV/0!	fps	
Y. Vertical Corrected Ve								fps	
$\therefore$ Flow Rate (Y x G x 60).							#DIV/0!	cfm	
Z. Vertical Flow Rate (Y	Ύx G x 60)							cfm	
A. Flow Rate (Standard)	{Z x (L/29.92) x l	520/(460	)+H)]}				#DIV/0!	scfm	
A1. Vertical Flow Rate (	Standard) (ZZ x (	L/29.92)	x [520/(460+	۰۰۰ H)]}			#DIV/0!	scfm	
B. Dry Flow Rate (AA x (								dscfm	
B1. Vertical Dry Flow Ra	te (AA1 x (U/100	)))					121	dscfm	
SAMPLE CONCENTRAT	ION/EMISSION F	RATE							
CC. Sample Cr+6 Concer									
D. Sample Cr+6 Concer	-			Wt.)]					
E. Sample Cr+6 Concer	-		-				7.04E-03		
F. Sample Emission Rat		,							
G. Sample CrT Concent	-							0	
H. Sample CrT Concent			-	Wt.)]					
I. Sample CrT Concentrat	ion [GG x (64798	5.9/0.028	3168)]				1.06E-01	μg/m <sup>o</sup>	

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-22-

Date(s): 6/1/2017 and 7/13/2017

Test No. 2	Test Date: 7	/13/17					
	S	OURCE TES	T CALCULA <sup>-</sup>	TIONS			
Sampling Location: V Sample Train: 5	Veber Metals-Furnace	339- East Ex	haust Stack		Input by: J	. Aspell	
SUMMARY A. Average Traverse Veloci A1. Average Traverse Vertic B. Gas Meter Temperature ( C. Gas Meter Correction Fa D. Average Orifice Pressure	cal Velocity (Use 60 deg.F for Tem ictor	p Comp. Met	ers)			#DIV/0! 0.00 104.625 1.0051 2.93	•
E. Nozzle Diameter						2.33	inch
F1. Stack Diameter or Dime F2. Stack Dim #2 (blank if c G. Stack Cross Sect. Area	ircular)	inch ) ft2	N. Samplin O. Nozzle X	rrection Factor g Time -Sect. Area Collection		0.84 120 0.00000	ft
H. Average Stack Temp I. Barometric Pressure		deg F ) "HgA		Collection		0.00032	mg mg
J. Gas Meter Pressure (I+(D K. Static Pressure L. Total Stack Pressure (I+(H	-0.1	2 "HgA 7 "H <sub>2</sub> 0 9 "HgA		apor Condens ume Metered		468.6 112.521	
T. Corrected Gas Volume [(	S x J/29.92) x 520/(46	0+B) x C				105.880	dscf
PERCENT MOISTURE/GAS	S DENSITY						
U. Percent Water Vapor in	Gas Sample ((4.64 x F	R)/((0.0464 x F	R) + T))			17.04	%
V. Average Molecular Weig	ght (Wet):						
Component	Vol. Fract. x	Moist. Fra	ct. x	Molecular W	/t. =	Wt./Mole	
Water Carbon Dioxide Carbon Monoxide Oxygen Nitrogen & Inerts	0.170 0.103 Dry Basis 0.000 Dry Basis 0.008 Dry Basis 0.889 Dry Basis	1.000 0.830 0.830 0.830 0.830		18.0 44.0 28.0 32.0 28.2	, , , Sum	3.07 3.76 0.00 0.21 20.80 27.84	
FLOW RATE							
<ul> <li>W. Gas Density Correction</li> <li>X. Velocity Pressure Correct</li> <li>Y. Corrected Velocity (A x M</li> <li>YY. Vertical Corrected Velo</li> <li>Z. Flow Rate (Y x G x 60)</li> <li>ZZ. Vertical Flow Rate (YY x</li> <li>AA. Flow Rate (Standard) (2</li> <li>AA1. Vertical Flow Rate (Standard) (2</li> <li>AA1. Vertical Flow Rate (AA x (U)</li> <li>BB. Dry Flow Rate (AA x (U)</li> <li>BB1. Vertical Dry Flow Rate</li> </ul>	ction Factor (29.92/L)∕	5 50+H)]} ) x [520/(460+	H)]}		· · · · · · · · · · · · · · · · · · ·		fps fps cfm cfm scfm scfm dscfm dscfm
SAMPLE CONCENTRATIO	N/EMISSION RATE						
CC. Sample Cr+6 Concentr DD. Sample Cr+6 Concentr EE. Sample Cr+6 Concentr FF. Sample Emission Rate GG. Sample CrT Concentral HH. Sample CrT Concentratio	ation [54,14 51.99] ation [CCx 64798.9/0. (0.00857 x BB1 xCC). tion [0.01543 x (Q/T)]. tion [54,143 51.99]	6 (Molecular 0283168] 6 (Molecular	Wt.)] Wt.)]			0.00E+00 0.000E+00 0.00E+00 4.66E-08 4.856E-05 1.07E-01	ppm μg/m <sup>3</sup> lb/hr gr/dscf ppm

Test Nos. <u>17-339, 17-341 and 17-343</u> -23-

Date(s): 6/1/2017 and 7/13/2017

### EPA Method 19

 $\begin{array}{ll} \mbox{Exhaust Flow Rate (dscfm) = Gas Usage (scfm) x HHV / 1,000,000 x F_d x (20.9/(20.9-\% O_2)) \\ \mbox{HHV, nat. gas:} & 1050 \mbox{BTU/cu. ft.} \\ \mbox{F_d-factor, nat. gas:} & 8710 \mbox{ dscf/MMBtu} \end{array}$ 

#### Furnace No. 337 - June 1, 2017

Test Time	Gas Meter Reading, Cu. Ft. (uncorrected)
+0	3185700
+30	3186200
+60	3186500
+90	3187000
+120	3187300

Cu. Ft. Nat. Gas per Hour (uncorrected): 800 cfh

Pressure-Temperature Correction Factor (12 psig, 60°F): 1.792 (SCAQMD ST ID PR16359) PR16359 is a source test conducted by Weber and submitted to SCAQMD from which the meter correction data was available.

Corrected Natural Gas Usage: 1433.6 scfh = 23.89 scfm

Stack O<sub>2</sub>: 10.0%

Exhaust Flow Rate = 418.99 dscfm

#### Furnace No. 339 – July 13, 2017

	Natural Gas Usage										
Test Time	Process Control (scfh)	Gas Meter, Cu. Ft. (uncorrected)	Gas Meter, Cu. Ft. (corrected)								
+0	1717	29,388,800	54,509,000								
+15	1574	29,389,000	54,509,000								
+30	1481	29,389,300	54,509,000								
+45	1488	29,389,400	54,510,000								
+60	1360	29,389,600	54,510,000								
+75	1335	29,389,800	54,510,000								

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-24-

Date(s): 6/1/2017 and 7/13/2017

		e	
Test Time	Process Control (scfh)	Gas Meter, Cu. Ft. (uncorrected)	Gas Meter, Cu. Ft. (corrected)
+90	1283	29,390,000	54,511,000
+105	1311	29,390,100	54,511,000
+120	1250	29,390,300	54,511,000
AVG	1,422.11 SCFH		

Corrected Natural Gas Usage: 1422.11 scfh = 23.70 scfm

Stack O<sub>2</sub>: 2.2% (average of both exhaust stacks)

Exhaust Flow Rate (total both stacks) = 242.2 dscfm

Single stack exhaust rate = 121.1 dscfm

(ST ID 14194 shows exhaust flow between stacks are within 6% of each other. Source Test Engineering considers flow rates within 10% as the acceptable margin of error and the stack flow rates will be considered equal)

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -25 Date(s): <u>6/1/2017 and 7/13/2017</u>

### APPENDICES

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -26 Date(s): <u>6/1/2017 and 7/13/2017</u>

### APPENDIX A

SCAQMD Compliance Staff Data

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-27-

Date(s): 6/1/2017 and 7/13/2017

 Jason Aspell

 From:
 Eric Padilla

 Sent:
 Friday, May 12, 2017 6:46 AM

 To:
 Jason Aspell

 Subject:
 FW: Weber Metals today

From: Areio Soltani Sent: Thursday, May 11, 2017 5:32 PM To: Garrett Kakishita <gkakishita@aqmd.gov> Cc: John Anderson <janderson@aqmd.gov>; Amanda Sanders <asanders@aqmd.gov>; Jeffrey Lloyd <jlloyd@aqmd.gov>; Min Sue <msue@aqmd.gov>; Mike Garibay <MGaribay@aqmd.gov>; Eric Padilla <epadilla@aqmd.gov>; Wayne Stredwick <WStredwick@aqmd.gov>; Bill Welch <bwelch@aqmd.gov> Subject: Weber Metals today

Garrett, et al.:

I wanted to give a quick summary of Compliance's activities at Weber Metals today 05/11/2017. Mike Garibay and his group were still onsite conducting testing when Min and I departed, so this is not a complete summary of all activity. Present onsite from SCAQMD were: Areio Soltani, Min Sue, Mike Garibay, Eric Padilla, Wayne Stredwich, Bill Welch. From Weber: Doug McIntyre, VP Plant Engineering; Jonathan Ayon, Manager Plant Engineering; Malinda Miller, Plant Engineer I; Jorge Pelayo, Lab Technician. From Ramboll Environ (Weber's consultant): Erik Person, Senior Manager.

We were granted access to 1 press and 1 furnace, both down since Monday for maintenance and repairs. The press was the "Mesta Press", manufactured by Mesta Pahnke and rated at 33k tons, used on both aluminum and titanium parts. A die was loaded in the press. We collected 2 bulk samples from around the press:

Sample #1 = loose debris colored black (pulverized metal scaling) and white (kitty litter); & Sample #2 = fibrous fabric-looking debris.

We used the XRF on 2 locations, recording total Cr:

Horizontally on die itself = 354 PPM +/- 34 PPM; & Footing used as a load out area = 596 PPM +/- 34 PPM.

Next we inspected a furnace, a titanium rotary furnace called "OV337" or "OVE337". We observed a box of "Inswool" ceramic fiber outside of the furnace as the furnace was in the process of refractory and insulation maintenance and repair. We scanned 4 surfaces with the XRF and recorded total Cr:

```
Refractory on furnace doorway floor = 818 PPM +/- 28 PPM;
Brick on furnace doorway ceiling = 2910 PPM +/- 45 PPM;
Ceramic fiber insulation wall inside furnace = 5007 PPM +/- 60 PPM (highest reading onside); &
Burner tunnel refractory = 3468 PPM +/- 47 PPM.
```

We took 3 samples from inside of the furnace:

Sample #3 = Refractory debris on rotary floor; Sample #4 = Dark dust and debris from gap in floor; & Sample #5 = Ceramic fiber insulation debris.

1

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u>

-28-

Date(s): 6/1/2017 and 7/13/2017

We provide a split of each sample to Ms. Miller. Ms. Pelayo also carried an XRF unit and scanned surfaces after I scanned them. We verbally requested SDS information for "Inswool" ceramic fiber insulation, brick and refractory and will also send an email requesting this information.

-- Areio

Areio Soltani – Air Quality Inspector Toxics and Waste Management Unit South Coast Air Quality Management District 21865 Copiep Dr – Diamond Bar, CA 91765 (909) 396-3318 – Fax: (909) 396-3342

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -29 Date(s): <u>6/1/2017 and 7/13/2017</u>

### **APPENDIX B**

Field Data – June 1, 2017

Test Nos. <u>17-339, 17-341 and 17-343</u>

-30-

200	ampling	<u>17-34</u> Location:	amoic	the second s		Source			5	ample T	rain:	-27				
F	ilter: robe:	Leak Check: cfm @ cfm @ cfm @ e Leak Check:	20		vac		Po Filt Pro	st-Test I ler obe: ot Tube	0	cfm @ cfm @	10 Pass /	"Hg v "Hg v Fail				
Time	Sample Point		Reading (dcf)	Reading (dcf)	Reading (dcf)	Sta Velocity	Temp.	Velocity	Calculated Sampling	Orifice	Probe Temp.	Filter Temp.	Imp. Temp.	Meter	Temp. F	Vacuu "Hg
	No.	Start 402.790	Head (^H <sub>2</sub> O)	۴	(fps)	Rate (cfm)	ΔP ("H <sub>2</sub> O)	۴F	°F]	%F	in	Out	N.S.			
			11-12-01	California (	A Destroya destroy	1	20	1 A	1000	52	85	83	7			
1125	STHE	1111 440	机动力	1	24	1	3,0	11111	10 C	49	91	85	7			
+10	COLUMN CHARLEN	411.445		Real Provides		12-24-35		Constants	Contraction of the	49	99	87	7			
tza	1000000	420,100		100	An of the later	1	3.0	in a star	THE STORE		and the second se					
30	Contraction in the	429.500	2010 8 1	1.1.1.1.1.1	191		3.0		and the second second	50	101	89	7			
40	- Martin	438,625	dy to at a	10 Court 140	Sector Sector	1	3.0	a Final S	The Local Division of the	52	104	92	77			
50	and a	447,690	STATE OF STREET, STR	the states	Contraction of the	Co. Contractor	3:0	Contraction of	Inclusion.	54	106	93	5			
60	12:25	456,700	A CONTRACT	34 200	*1. 	EXCLUSION	30	1.1	11111111	42	106	95	5			
70	and the second	465,915	And Street and	Total distances	1. K. 1. 1.	Arrest Concerned	3.0	Contraction of	- The second	45	107	96	+			
80	1.4.5 m	474,990	1.140	- 01 - 11 - 11 - 11 - 11 - 11 - 11 - 11	RO ROL	A VENE H	30	PARTY CONTRACTOR	Stor Marine	50	107	26	7			
90	-	484,150	State of the local division of the	12018		and the second second	3.0	1.14.2	ALL PROPERTY OF	43	109	98	7			
100	Star St.	493,240	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1. S. A.	「東京市大山」	the star	3.0	States -	CONTROL OF	51	111	100	7			
110	1.	502.355	- Tabler	1 638.7	1.1.1.1	1	3.0	1.143	100	49	112	101	77			
120	STOP	511,430	1000	S. Oak	ALC: NOT	Change -	3,0	Collin Design	22.55	55	113	102	. +			
	172	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			The second	CONTRACT OF STREET	1.10			Child Solution			1			
-	A. 40			1.1	(+1) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (			No.	PPROX STREET	AND POINT	Concession of		2.4			
(Net Vo	I. Uncorr.)	1 - 3 - 1 - 2	Avg	6 - 18 . 4	1	67.55	1100	19.12	21.524		1.1	124	54.46			
Nozzle	Diame	ter:	Stack		re:	R	anister # ecorded tot Fact	By:	ω	Star	E - 1	<b>*</b>	lg vad			
	Pressur	e in Stack: + Calibration D	·/	Cal;		H <sub>2</sub> O		V			e diam.	7				
Magne Pitot T	ehelic No. ube No. tiometer	<b>0</b> .		Cal: Cal:	-24-17		1	C			19.5	Stas Din	sk tensions			
Therm Gas M	locouple leter No Corr. Fa	No. 70/0	8 (	Cal:	24-17	}	-1:3-	+	-		• [1	ول	]			

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -31-

S	ampling	Location:	1 Ln	# 3	21	ber py			S	ample 1	rain:	#17	1,To
			- 2 - Au	1.1	Traverse	Source				ate: ample T eck:	1.11	1.1	40
		Leak Check:						st-Test L					-
FI	Iter:	cfm @			g vac		Filt			:fm @ _	1.1.1	"Hg v	ac
		0.00 cfm @		7 "н	g vac			be: j	9,00 0	:fm @ _	14		ac
Pi	tot Tube	e Leak Check:	Pass	7 Fail			Pit	ot Tube	Leak Ch	eck:	Páss /	Fail	
Time	Sample	Gas Meter	Sta	ck		Calculated		Probe	Filter	Imp.	Meter	Temp.	Vacuu
. 1 A .	Point #	Reading (dcf)	Velocity	Temp.	Velocity	Sampling	Orifice	Temp.	Temp.	Temp.		F	" Hg
- C.	11:20	Start 188,128	Head (*H <sub>2</sub> O)	*F	(fps)	Rate (cfm)	 (*H₂O)	°F	°F	°F	In	Out	
ker la	110	195.15	( 1120)			teanly	1.7			53	81	80	4
1:20	1mm		the second second	THE REAL PROPERTY.	COLUMN T		15	1013L.081.18	1. 1. 1. W	17	6~	81	1
1-19	130	202.75		COLUMN .	INCOMPLETE.	100000000000000000000000000000000000000	12		COLUMN AND A	16	36	31	74
1210	740 2	and the second se	0.4.6 19405	- HONGLANDS	100000-0000	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1.7	IN COLUMN	Cile And State	mel	97	36	1
170	a subscription of the second	223.0	112 July 1 Subiri-	ALC: 191.051	10,200,000000	CONTRACTOR OF STREET, S	1.1	Control of America		56	1 3	20	t
790	150	the first hardware also have been been		Contractor of	- Breadlynches		117	A START OF START	ALC: NOTION	38	96	89	74
+12	760	224.6		and the	J.A. C.	CONTRACT.	17		1. S. T. S. I	28	78	70	4
760	170	236.5	-			INCOMPANY OF	1.7	No. of Concession, Name	STATISTICS.	58	29		7
170	180	243,4	1.4.0.4.1	Transa.	SLAN RUNS	1.2514.516	1.7	CORP. COM	I. CARACTER	37	.77	73	7
180	190	250.0			-	and the second sec	117		No. of Concession, Name	54	101	23	4
190	+184	256,7	/				1.7	PROMITING ST		38	102	75	4.
-100	410	203,95					1.7			47	103	26	14
	+120	270,112		ながます		a service and	1-7	1200		A STREET	174	1/	9
H120					1.000						1.11		<u> </u>
361	守之后部督				100.08.1000	A SPECT	Carrier!	20.35			No.		
/1/									1	1.1			
States -	×	· · · · · · · · · · · · · · · · · · ·	_		1.1.1	A	A	12 + 00	Pup	11.	1 .	1)	
	4	Restart	197	UDR	GIS 5	CMARCA	1.300	12:06	5100)	(phil	V 64	91	Conversioner
1922	S. A. C. S. S. S.	1esici 1	14	12:0	a and a state of the	SECONDERVISED.	an New York	(Teller stress		2112/2012/2012	0.000	1000	2123
				Contraction of	MINE DOWNLOW	0.0000000000000000000000000000000000000	-	the base of the	Contraction of the	AND THE REAL PROPERTY.	Por statements	-	INCOME.
201-0-10					12.5.24 法法法	95 B 1 3 3				Contraction and	2003000	1,2419,222	CA STOR
STATISTICS.	a de la caracita a			S2-219-25	PURSE IN COM	200000222000	of the local division of the	A ROAD PRINT		ane were	11111210	100302104	110730
				T	ERA/I	RET.	TEM	0:1	725	F		Colligation of	200000-000
100400383	S. S. States		1000	7	PIVYI		CONTRACTOR NO.	SCHOOL SHOP	1-0	CONTRACTOR OF		Con Bellevil	19.31.04
	-											-	Ner connect
1.	10.77			1						No. State			12.30
(blat ) (al	Uncorr.)		Avg.		e								
	S. (* 14					1		ŧ: <u>54</u> ° By: <u>₿</u> or:	-		//:3	8	28'
K-Fact	or: 0 4	5821	Stack	Moistu	re:	C	anister #	f: <u>27 °</u>	202	Start	11:1	6	Ig vac
Nozzle	Diamet	er:				R	ecorded	By: ジ	where	L			5"
	etric Pre	and the second se	30,2	8 .	HgA	Pi	tot Fact	or:		1.1			
		in Stack: (4	V	4.0		H <sub>2</sub> O					5	-	
			. — (			1			~	$\sim$	$\rightarrow$	_/	
		Calibration D	and the second se	Cal	AL/A	<u> </u>	T	1		N			
		neter No 71		Cal:	N/A	2		1 .	1	<u> </u>	diam.	1.1	
	helic No			Cal:		2	1.1	1	1		- 4	Star	*
	be No.			Cal: _		).		$\mathbb{N}$					nensions
	ometer	1-4-4-4			(25/14	)		$\rightarrow$	/		dian.		
Thermo	couple	No. 2/202	(	Cal: 5	US/17	) [ ]						14	
	ator No.	No715	(	Cal: 🍕	128/17	) []		-		· · · · ·	-(1	5-	1
Gas Me	ster INO.	10 - 11 -											

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -32-

		Location:	Com	npany:	_We	ELD B	YETAL	-5	D	ate: ample Tr	6 /	1/17	r
0	ampling	Location.	AMIT			Source			0	ampie n	can i.		£
P	Teet I	eak Check:		1	Traverse	Source			eak Ch	eck	-		
	Iter:			"Ho	yac			ter:		cfm @ _		"Hg v	vac
P	robe:	cfm @			vac			obe:		cfm @		"Hg v	vac
P	tot Tube	Leak Check:		/ Fail	10.000		Pit	ot Tube	Leak Ch	ieck: I	Pass /	Fail	
Time	Sample	Gas Meter	Sta	ck	-	Calculated		Probe	Filter	Imp.	Meter Temp.		Vacuum
and a	Point	Reading (dcf)	Velocity	Temp.	Velocity	Sampling	Orifice	Temp.	Temp.	Temp.	•	F	" Hg
		Start	Head ("H <sub>2</sub> O)	°F	(fps)	Rate (cfm)	 ("H₂O)	°F	°F	°F	In	Out	-
1922	128000	SILIC	A 1	MDIN	ICER	BRO	ice .	DURI	NE -	Two	200	15-13	
		2000/2001/2021	s CH	1		EMPT	5 . (	ISE	AS F	ie co	BLA	NK	IF B.
783	in Bull	and the second second	al children	19 91	1 Particular	1121-222	1000	1.15	122	at		12012	a to state of
				Concerned in	MARCO IN	STREET, DAY 2000	E	10.900.90	10 - 1 - 1 - 1 - 1 - 1 - 1	70	LO-STURY	02500	
223	and the second		Service	Stat film	inservine g	STORE COM	ad intrast Part	per station of the	and a second				
	0.8253		12.0538	SAMS.	ACC NO.	11.31.20	() 新教学校	ACT VIELS	しなが明	1.5.1184	\$44 Y 2	1520	1240-571
i forma	10-1-1-1	a vanteurente	에 나서	Sellar	AUMERS.	the data set of	in the state	Sile+initer	C. C	1212021	100	102	1000
				Data Cares	Contraction and		2.573		C.704018-10		1000	12/222	A.C
	ACSO		March 19 (FD) 2	A. P. Leis	Constant Sale	1751907951	Sector Con	C R PE PARCE		Contraction (19)	1		
INE D	100000	TO SALE AN ADAMA	No. of Cashiel	to the	N. P. P. L.	12.000	1.110.00	Ray and	1-494242	1975	See 1	100	1000
	5 10 10	医液体 化	1250.234	13/42	APPA SE	ROTH-main	Sh teta a	2015-23	0120733	100000	Bes Vi	Parage-	
		STREWELL SHOT SHOT				-		Charles March	CALCER (THE P	in the second	10.0724	COLOR DO	1.1.1.7
6.75	R. 79832	and the second second	ALL STREET	201-00	STERE &	Statistics and	1000074-00	Dell'activity of	Paper and a second	Contraction of the	C.P. CONTRACT	200-221	
1.151	The Series	10 10 10 10 10 10 10 10 10 10 10 10 10 1	8	1.34	10 38 303	6-7-8-376	1251111	1000	S. Sup Sil	Neller 2		10 BUS	8.19.1
Constant of the	2.536-35	Sector and	Party and	in the second	1. 1.	and served	Real Pro-		She was	1000	1.15	ALC: NO	Street L
				A CONTRACTOR			Concernence of	10.000 × 10.000	1000000	Waster-	Stillette	Same Pro	and a second
	N		June 1	COLORS	ANNE TAXABAN	C-FORMER P	ELECTRON .	Status and	Construction of the local division of the lo	State Sector	1000		
A MONTH	5.351150	A CONTRACTOR	1 North	Title 1	REVENCES	ST Vile	ATTACK T	(Incolles)	4.1		2451	100	- 25
							40						
Net Vol	Uncorr.)		Avg.					J.					
(-Fact	or:					С	anister	#:		Start	:		'Hg vac
lozzle	Diamet	er:				R	ecordeo	By:					
	etric Pre				HgA		itot Fact						
			+/-	-	"	H <sub>2</sub> O					5	7	
		Calibration D	)ata				+	1/		1.1	-	$\neg$	
ncline	d Manor	neter		Cal:	N/A	)	1.8	V		N	diam		
lagne	helic No	).		Cal:		)		1		1	- 0	¢ su	ack
Pitot T	ube No.			Cal:		2	1				diam.		mensions
	iometer			Cal:		2	-		_		and.	1	
herm	ocouple	NO		Cal:		{	1	-		•	1	RL-	7
	eter No. Corr. Fa		(			1					C	5	
rerei	oon, ra												

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -33-

Date(s): 6/1/2017 and 7/13/2017



### Furnace 337 Gas meter readings Recorded by E. Padilla

Test Nos. <u>17-339, 17-341 and 17-343</u>

-34-



 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -35 Date(s): <u>6/1/2017 and 7/13/2017</u>

Field Data – July 13, 2017

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-36-

		<u>/7-343</u> Location:		3 3 3 9	1 we	er Me st st	ack.		S	)ate: iample 1	rain:	15	-
Fi	iter:	Leak Check: cfm @ cfm @ f Leak Check:	-15 Pass	"Hg "Hg / Fail	vac	Source	Po Filt Pro	ta st-Test I er: bbe: ot Tube	0	cfm @	15 Passy	"Hg \	vac vac
Fime	Sample Point	Gas Meter Reading (dcf) Start_511, 196	de <sup>ve</sup> Sta Velocity Heat ("H(0)		(Velocity (fps)	Calculated Sampling Rate (clm)	Orifice ∆P ("H <sub>2</sub> O)	Probe Temp "F	Filter Temp. °F	Imp. Temp. °F		Temp. F	Vacu *H
25	+15	525-47			1	- yeariy	( injo)			42	91	89	9
+15	1.30	538.13		211221	Ser Lin	1.5	Increa		- 244	42	102	92	10
170	F45	552.67	3.0		100				-	45	111	18	10
7 75	160	516.43	3.0	112.20	10:22210	15.521	11000	11-2-24	1111252	43	113	102	11
++0	+75	580.00	3.0	_	2				-	48	116	105	11
+75	+90	593.27	2-7	1200	No. Con	1117 494	Arres 1	1121-26		52	_		12
-70	+105	696.36	2.6		Lower Law	of succession of succession	ALC: NO.		Charles and	59	120	113	12
+20	+120	619,212	2.6		and the second	the second second	and the second	aprenate in		45	120	112	12
- dorn			Married Party		a constant								Andrea
	111111		ESE IN	0114		Contraction of the	-	1100	191-101	12:13:14	0.99	1-411	in our local
100			12101125	17117	IL HOUSE	1.8	STEN.	Parts 14	III ye	51143	1	1263	1
	Interna		the latter				11111	16112	25850	1001	1114		1
	THUL I	841-424-4	14144	- Alar	-2-1-	2	1024		L SECT	Paters -			2445
10754	115621-3	Call Contractor	Parties .	1000	SALIN.	100.042	(SIGNAL	0.000	14 232	112100		100	11111
	and the second	HT (21 - ALL)	-	Constant of	The second	Carlo Lance page	And succession	-	and the second	-		and the second	100.04
1							and an owned						
		A REAL PROPERTY AND A REAL			Toursell	100000000000000000000000000000000000000	Press I	and the second	and a second second			and the	1
a starte	123.72	Galage A	A PROPERTY A	813 (Tr.	100.00	1			-11.2	1	166311		
K-Facti Nozzle Baromi	Diamet etric Pre	issure:		Moistur	HgA	Re		e <u>54</u> By: <u>2</u> or:		Star	: _34	2 1	Hg va
nclined	d Manor	Calibration D	ata (	Cal:	N/A	}	Ť	(	7	r I	dan o		
Notenti Notenti	ube No. ometer occuple eter No.	No. 10314	2 (	Cal: Cal: Cal: Cal:	24/17	))))))	+	-	4		dan	399	ck nemijori 7

-37-

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT	
TCA TEST DATA SHEET	

		-					
Tank #		PLE A	Control #	Tank #		AMPLE B	Control #
Pre-Test Leak Check:				est Leak Che	ek:		
Post-Test Leak Check:			Gauge _// Δ P	Post-	Test Leak Ch		
Bar	ometric Press	ure	"HgA	Static	Pressure	*H	gA (±"H20
TIME	VACUUM ("Hg)	fLOW (cc/min)		TIME	VACUUM ("Hg)	FLOW (cc/min)	COMMENTS
il 28 An		21				1.1.1.	
+5	24	21.				-	
+10	16	51					
1704							
	. · · ·					1	2.3
1.1							like of
		-		1000			

160	-1990)	1200	1000	6000	600	200	200	7/0	守玉,92
		Santingian and			automotive   p.c.		2.90	2.65	1012015
	COLUMN S			ALCONOM D		2.70	2.45	2.20	-20
				AND AND A	2.70	2.30	2.15	1.90	25
		10.599.69		2.86	2.40	2.00	1.85	1.65	0.034
			2.85	2.50	2.10	1.80	1.60	1.40	85
		2.95	2.50	2.25	1.90	1.60	1.40	1.20	40
	3.00	2.60	2.25	2.00	1.70	1.40	1.26	1.05	45
	2.70	2.40	2.05	1.85	1.60	1.25	1.15	0.95	1, 1940
2.80	2.45	2.15	1.85	1.65	1.35	1.15	1.05	0.85	55
2.55	2.30	2.00	1.70	1.65	1.25	1.05	0.95	0.80	63
2.40	2.15	1.90	1.60	1.40	1.15	0.95	0.85	0.70	6.5
2.25	2.00	1.75	1.50	1.30	1.05	0.90	0.80	0.65	14670
2.16	1.90	1.65	1.40	1.25	1.00	0.80	0.75	0.60	76
2.05	1.80	1.55	1.30	1.15	0.90	0.75	0.65	0.55	10.80
1.95	1.75	1.50	1.25	1.10	0.85	0.70	0.60	0.50	
1.90	.1.65	1.50	1.25	1.05	0.80	0.65	0.55	0.50	30

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-38-

S	ampling	17-343 Location:	AVE3	39 -	EAST	STACK	(FN	RUNC	) s	ate: ample T	rain:	5	_
Fi	iter: robe:	Leak Check: cfm @ 2.004 cfm @	15	*Hg *Hg	vac	Source	Por Filt Pro	st-Test L er: bbe: O <sub>3</sub>	015	cfm @		"Hg v "Hg v	acac
Pime	Sample Point	Gas Meter Reading (dcf)	Er, Sta	e	( Websity	Calculated	100010	Probe	Filter	Imp.		Fail Temp.	Vacuu * Hg
105		Sat 2707 284.63	Head Hill	*F	(tps)	Sampling Rate (cfm)	("H(O)	Temp. °F	Temp. "F	Temp. °F	In	Out	
192	115 4530	298.84	7	1745		STAL 2	3.0	1011		45	91 98	99	8
	+45	327.06	- 17	1745	15 tim	ST.CH	3.0	TPACE -	-	48	109	99	8
P.B. Lan	+75	341.28 355.44 369.43	19	1745	0.2	A.S. Harris	3.9	-11/2/8		43	104		8
305	+105 +120	393.205	19	1745	e Origina -	BOX (21)	2.7	SHORN	79.5.	45	119	108	9
0000	Sylines		Photos and	ALC: NO.			in an an an		(Internet)	a orea	100.00	1000	-
	Cizcave.	and a most of the	- interes	HI03	12070	NAL COMP.		4+100A (F)	-		0 m 200		1715
angine in	0.000		dinas -	20112		- 11 - N 1		11239	in the second	CHECK IN	Sixten)	KOPE2	1. A. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
ing se	AND COLOR		and the state	ACCOUNTS OF	2.02.000.00	CONTRACTOR OF	ANNUTS.	IN PARTY OF	The local	Contraction of	1000	ROMEN	100.00
12.63	(Crister)				- States	Series	THESE	1000		12	Stan -	Sector and	-
CIRS)	RECEIPTION		CALCULATION OF	840350	et al la constante	1000000		88.4	EN/27	2010	1	10000	SVAR
The second	(Aleman)	initian Sieth	ing a			N PAGE	in and	17-17		in a	N. Arros	12/2	a sh
(-Fact	Uncorr.)	and the second s	Avg. Stack	Moistur	e:		anister #	54	139 %		3	<u> </u>	łg va
Barom	Diamet etric Pre Pressure	and the second sec	30.20	0.02			tot Fact	By:	د	<u>F</u>	5	7	1
<b>A</b> agne	helic No	Calibration I meter 107	5 (	Cal: Cal:	N/A	)	1	(		N 1		Star	3
Potenti	ube No. ometer occuple eter No. Corr. Fa		2 2020	Cal: 4/		) ) )	+	-	-	1	cun.		ensions

-39-

Date(s): 6/1/2017 and 7/13/2017

## SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT TCA TEST DATA SHEET

Date: 7/13/17 Test No.: 17-393	Page No.: Recorded by:
Company/Sampling Location:CBeD_Me Basic and Control Equipment:OVE.33.9	EAST STACK - 54/39 CANIFOR
SAMPLE A Tank # 54/39 Trap # Control #	SAMPLE B Tank # Tran # Control #
Pre-Test Leak Check: Gauge <u>50</u> ΔP	Pre-Test Leak Check: Gauge
Post-Test Leak Check: Gauge 2. <u>A P</u> 0	Post-Test Leak Check: Gauge
Barometric Pressure 30.2. "HgA	Static Pressure"HgA (±"H2O)
TIME         VACUUM         FLOW         COMMENTS           ("Hg)         (cc/min)         (cc/min)         (cc/min) $1/28$ 30         0.6         (cc/min) $1/33$ 30         (c.9)         (cc/min) $1/35$ 2.9         (cc/min)         (cc/min) $1/50$ $52$ $0.6$ $cm/min$ $1/50$ $52$ $0.8$ $cm/min$ $1/50$ $52$ $0.6$ $cm/min$ $1/50$ $1/100$ $1/1000$ $1/1000$ $1/1000$ $1/1000$ $1/1000$ $1/1000$ $1/1000$ $1/10000$ $1/100000$ $1/1000000$ $1/100000000000000000000000000000000000$	TIME         VACUUM         FLOW         COMMENTS           ("Hg)         (cc/min)

### TCA SAMPLING INTERVAL TABLE ( $\Delta P$ )

00	- 70 is	200 200	- 400	1000 g	000	1000	18000	1:30	18,00
STREET, 015	2.65	2.90	an one set in	DESIGNATION OF	(DOCIDES   DE	COSTAL IN		and search the	536.3745
20	2.20	2.45	2.70				na antia fir		
add 100 225	1.90	2.15	2.30	2.70	19-22-09-022-026				
1000 000 000 CO	1.65	1.85	2.00	2.40	2.85		REAL PR	1. 1. 1. 1. 1. 1.	
25-03-05	1.40	1.60	1.80	2.10	2.60	2.85			ACT COMMON AND
04-206-10	1.20	1.40	1.60	1.90	2.25	2.50	2.95		
105 C 10 10	1.05	1.25	1.40	1.70	2.00	2.25	2.60	3.00	
10.000	0.95	1.15	1.25	1.50	1.85	2.05	2.40	2.70	
automatic 515	0.85	1.05	1.15	1.35	1.65	1.85	2.16	2.45	2.80
and an address of the	0.80	0.95	1.05	1.25	1.65	1.70	2.00	2.30	2.66
35	0.70	0.85	0.96	1.16	1.40	1.60	1.90	2.15	2.40
ALC: NO. 70	0.65	0.80	0.90	1.05	1.30	1.60	1.75	2.00	2.25
3/5	0.60	0.75	0.80	1.00	1.25	1.40	1.65	1.90	2.15
125325620	0.65	0.65	0.75	0.90	1.16	1.30	1.65	1.80	2.05
105	0.50	0.60	0.70	0.85	1.10	-1.25	1.50	1.76	1.95
0.0000030	0.60	0.55	0.65	0.80	1.05	1.25	1.50	1.65	1.90

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-40-

Date(s): 6/1/2017 and 7/13/2017

S	est No. ampling	_ <u>/7-343</u> Location:	Com	ipany: 39	Freed	BLANE	1 ETA	<u> </u>	D	ate: ample T	7// rain:	3/1	74
					Traverse	Source	Test Da	ta					'
F	ilter:	Leak Check: cfm @ 	10		vac vac	A.	Filt	st-Test L ler: ob <del>e:O</del> ot Tube	15	cfm @ 	Pass	"Hg v "Hg v Fail	
Time	Sample	Gas Meter	Sta	ck		Calculated		Probe	Filter	Imp.	Meter	Temp.	Vacuum
	Point	Reading (dcf) Start	Velocity Head ("H <sub>2</sub> O)	Temp. *F	Velocity (fps)	Sampling Rate (cfm)	Orifice ∆P ("H <sub>2</sub> O)	Temp. °F	*F	Temp. °F		FOut	"Hg
	 									e si dan			
-11(2)							10.482	(44) (* ))		1000	1000		
								era esta Pra esta					
1999			to all the										
Sec.		- - 1.004											
	100000										and the		
6.35	1241220										1225		1912-1.1
100			3/42/3	1999			1110	and the second			10000	101800	
(Net Vo	Uncorr.)		Avg. Stack	Moistu	ne:	Ca	anister #	¥:		Start	:		Hg vac
Barom	e Diamet etric Pre	ssure:			HgA	Př	acorded tot Fact						
Incline Magne Pitot T Potent Therm	d Manor helic No ube No. iometer occuple leter No.	Calibration I meter No No		Cal: Cal: Cal: Cal: Cal: Cal:	N/A	H <sub>2</sub> O ) ) ) )						. 340	ck netsions

Revision 01/09.

-41-

Date(s): 6/1/2017 and 7/13/2017

### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT TCA TEST DATA SHEET

	Basi	ic and Control	Equipment							
		SAMP		0	1.1	SAMPLE B Tank # Trap # Control #				
	Tank #	I rap	#	Control #_			Tank #	Trap #	(	ontrol #
	Pre-	Pre-Test Leak Check:		Gauge			Pre-T	est Leak Chec		Jauge
				Δ P					4	Δ P
	Beef	Test Leek C	heale	Gause			Dent	Test Leak Che		Gauge
	Post-Test Leak Check:			Δ P				Test Leak Che	CK:	ΔP
						a3'	Static			C 1 4 1 4 1
	Baro	metric Pressu				7	Static			gA (#'H2
٢,			CRec			ί.			ecte	
1	TIME	VACUUM				-	TIME	VACUUM		
s	-	("Hg)	(ce/min)		9 29 3		-	("Hg)	(cc/min)	MCF
2	0				_	٩٩	0			5450
ł	+15	-		2938		ł				54509
- ł	+45			2938		ł				54509
	760			2138		ł	110			54510
ł	+75			2938		ł	+66			54510
	+90			2939		ł	+90			59511
1	+105			29390		- P	-105			54115
t	tizo	1. A. 1. A. 1.		29390	52	1				54511
t	1100				7	ł	1.1	1.		
1			· · · ·			1		1.1.1.1.1.1.1.1		1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -
ा						Г				
1									1	
1						Ľ	1.1.1.1		1.1.2.4	100
		1.1.1					H	or yusic	MINIM	1X
1	1.1.1			A SAMPLI		RV	AL TAE	$SLE(\Delta P)$		1.1
E	前 一周	70	200	(100)	500		300	1000	+50.0	140.0
	15	2.65	2.90	Suprements.						
F	200 201	2.20	2.45	2.70	2.70	1.0				
P	30	1.65	1.85	2.00	2.40	2 C C C C C C C C C C C C C C C C C C C	2.85			
1	314	1.40	1.60	1.80	2.10		2.50	2.85		

1.20 1.60 1.90 2.50 1.40 2.25 2.95 1.05 1.25 3.00 2.70 2.00 1.25 1.50 1.85 2.05 2.40 0.85 1.05 1.15 1.35 1.65 1.85 2.15 2.45 2.80 2.55 0.80 0.95 1.05 1.25 1.55 1.70 2.00 2.30 1.40 1.30 1.25 1.15 1.60 2.15 2.00 1.90 2.40 2.25 2.15 2.05 1.90 0.70 0.85 0.95 1.15 1.05 0.65 0.80 0.90 1.65 0.60 0.75 0.80 1.40 0.55 0.65 0.75 0.90 1.30 1.55 1.80 0.60 1.10 0.50 0.70 0.85 1.25 1.50 1.76 1.95

1.25

1.50

1.65

1.90

0.80

0.65

0.50

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -42 Date(s): <u>6/1/2017 and 7/13/2017</u>

## **APPENDIX C**

District Laboratory Data

June 1, 2017 – Source Test

Test Nos. 17-339, 17-341 and 17-343

-43-

## SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182

Page 1 of 2

### **MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS**

TO Mike Garibay	LABORATORY NO	1714534
Supervising A.Q. Engineer Source Test & Engineering	SOURCE TEST NO	17-341
SAMPLE(S) DESCRIBED AS 3 Hexavalent Chromium Trains	DATE RECEIVED	06/01/17
5 Hexavalent Chronnum Trains	RULE NO	NA
SAMPLING LOCATION		
Facility ID 10966	<b>REQUESTED BY</b>	Jason Aspell
Weber Metals, Inc.		
16706 Garfield Ave.	DATE ANALYZED	6/2/2017
Paramount, CA 90723		
	DATE REPORTED	6/8/2017

## ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate(NaHCO3) solution)

	Train 40	Train 39	Train 38
Moisture gain, g	242.0	35.0	-
Silica gel% expended	90	75	0
Filter gain, g	0.0001	0.0003	-0.0013
Impinger 1 pH	9	10	9
Impinger 2 pH	8	10	9
Cr <sup>+6</sup> , ug	54.52	0.03	0.00
Total Cr, ug	480.29	0.16	0.10

**Recovery Notes:** 

Train 38: The neck of Impinger 4 broke in the field, therefore post-sampling weight and moisture gain values are not obtainable.

NOTE: Additional significant figures provided for calculation purposes.

Reviewed By:

Approved By:

Joan Mertit, Principal A.Q. Chemist Laboratory Services

Date Reviewed:

Aaron Katzenstein, Ph.D. Senior Manager Laboratory Services (909) 396-2219

Date Approved:

-44-

Date(s): 6/1/2017 and 7/13/2017

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182 Page 2 of 2

### **MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS**

LABORATORY NO 1714534

**REQUESTED BY** 

Jason Aspell

ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate(NaHCO3) solution)

### QUALITY CONTROL

### **BALANCE CHECK (MOISTURE GAIN)**

Lab No.	Result (g)	Limit (g)	<b>Check Status</b>
B17F012-CCV1	99.9998	$\pm 0.0005$	Pass
B17F012-CCV2	500.0	±0.2	Pass

### **CCV RECOVERIES (CR6)**

Lab No.	Results (ppt)	Limit (%)	% Recovery
S17F009-CCV1	100	90-110	100
S17F009-CCV2	93	90-110	93
S17F009-CCV3	99	90-110	99
S17F009-CCV4	97	90-110	97
CCV RECOVERIE	CS (TOTAL CR)	Limit (%)	% Recovery
S17F010-CCV1	4.87	90-110	97
S17F010-CCV2	5.14	90-110	103
S17F010-CCV3	5.00	90-110	100
S17F010-CCV4	5.12	90-110	102
S17F010-CCV5	4.91	90-110	98

REF B17F012 S17F009

S17F010

-45-

Date(s): 6/1/2017 and 7/13/2017

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182 Page 2 of 2

### MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS

LABORATORY NO 1714534

**REQUESTED BY** 

Jason Aspell

ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate(NaHCO3) solution)

### QUALITY CONTROL

## **BALANCE CHECK (MOISTURE GAIN)**

Lab No.	Result (g)	Limit (g)	<b>Check Status</b>
B17F012-CCV1	99.9998	$\pm 0.0005$	Pass
B17F012-CCV2	500.0	±0.2	Pass

### **CCV RECOVERIES (CR6)**

Lab No.	Results (ppt)	Limit (%)	% Recovery
S17F009-CCV1	100	90-110	100
S17F009-CCV2	93	90-110	93
S17F009-CCV3	99	90-110	99
S17F009-CCV4	97	90-110	97
CCV RECOVERIN	ES (TOTAL CR)	Limit (%)	% Recovery
S17F010-CCV1			
	4.87	90-110	97
S17F010-CCV2	4.87 5.14	90-110 90-110	97 103
S17F010-CCV2 S17F010-CCV3			
	5.14	90-110	103
S17F010-CCV3	5.14 5.00	90-110 90-110	103 100

REF B17F012 S17F009 S17F010

Test Nos. 17-339, 17-341 and 17-343

-46-

Date(s): 6/1/2017 and 7/13/2017

(		COAST AIR QUALITY M 1865 Copley Dr. Diamond			
s F	outh Coast	MONITORING AND REPORT OF LABORAT			
		(Page 1 of 3)	)		
To:	Mike Garibay Supervising A.Q. Engineer		Laboratory No.	1714534-13	
	Source Test & Engineering		<b>Requested By</b>	Jason Aspell	
San	npling Location		Rule No.	NA	
	Facility ID 10966		ST No.	17-341	
	Weber Metals, Inc. 16706 Garfield Ave.		<b>Report Created</b>	06/14/2017	
	Paramount, CA 90723				

### ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS, AND RESULTS

Percent hydrogen (H2), nitrogen (N2), oxygen (O2), and methane (CH4) by SCAQMD Method 10.1 (GC-TCD)

See attached results and sample information.

**Reviewed By:** 

8

Joan Niertit Principal A.Q. Chemist Laboratory Services

**Approved By:** 

Aaron Katzenstein, Ph.D. Senior Manager Laboratory Services (909) 396-2219

Date Reviewed:

Date Approved:

<u>06/14/17</u> ~/1/17\_

Form 2.0

-47-

Date(s): 6/1/2017 and 7/13/2017



### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr. Diamond Bar, CA 91765-4182

### MONITORING AND ANALYSIS REPORT OF LABORATORY ANALYSIS

		(Page 2 of 3)		
Laboratory No.	1714534-13			
Sample Description	SUMMA C	anister Canister 54205, Furnace Samp	ole	
Sample Date 06/01/2017		Received Date 06/01/2017		Analyzed Date 06/06/2017
Percent hydrog	gen (H2), nitro	ogen (N2), oxygen (O2), and methar (GC-TCD)	ne (CH4) by SC	CAQMD Method 10.1
Anal	yte, Unit	Result	MDL	MRL
H2, %	0	<0.2	0.2	NA
O2, %	0	10	0.2	NA
N2, %	0	80	0.2	NA
CH4,	%	<0.2	0.2	NA

-48-

Date(s): 6/1/2017 and 7/13/2017



### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr. Diamond Bar, CA 91765-4182

### MONITORING AND ANALYSIS REPORT OF LABORATORY ANALYSIS

(Page 3 of 3)

Laboratory No. 1714534-13

Percent hydrogen (H2), nitrogen (N2), oxygen (O2), and methane (CH4) by SCAQMD Method 10.1 (GC-TCD)

### QUALITY CONTROL SUMMARY

CCV1 (CC122586) Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
H2, %	1.00	0.94	0.06	PASS
O2, %	1.05	1.03	0.02	PASS
N2, %	1.07	0.96	0.11	PASS
CH4, %	1.04	1.01	0.03	PASS
<u>CCV2 (CC73109)</u> Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
H2, %	0.00	0.00	NA	PASS
02, %	24.65	24.63	0.02	PASS
N2, %	4.97	4.93	0.04	PASS
СН4, %	0.00	0.00	NA	PASS
<u>CCV3 (FF130)</u> Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
H2, %	0.00	0.00	NA	PASS
02, %	0.98	1.00	0.02	PASS
N2, %	93.66	93.9	0.24	PASS
СН4, %	0.00	0.00	NA	PASS
CCV4 (CC122586) Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
H2, %	1.00	0.94	0.06	PASS
02, %	1.07	1.03	0.04	PASS
N2, %	1.09	0.96	0.13	PASS
CH4, %	1.02	1.01	0.01	PASS
<u>CCV5 (CC73109)</u> Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
H2, %	0.00	0.00	NA	PASS
02, %	24.65	24.63	0.02	PASS
N2, %	5.01	4.93	0.08	PASS
CH4, %	0.00	0.00	NA	PASS
<u>CCV6 (FF130)</u> Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
H2, %	0.00	0.00	NA	PASS
O2, %	1.00	1.00	0.00	PASS
N2, %	94.01	93.9	0.11	PASS
CH4, %	0.00	0.00	NA	PASS

Test Nos. 17-339, 17-341 and 17-343

-49-

Date(s): 6/1/2017 and 7/13/2017

South Coast AQMD MONITORI	ALITY MANAGEMENT D Diamond Bar, CA 91765-41 NG AND ANALYSIS ABORATORY ANALYSIS	
	(Page 1 of 3)	
To: Mike Garibay Supervising A.Q. Engineer	Laboratory No.	1714534-13
Source Test & Engineering	<b>Requested By</b>	Jason Aspell
Sampling Location	Rule No.	NA
Facility ID 10966	ST No.	17-341
Weber Metals, Inc. 16706 Garfield Ave. Paramount, CA 90723	<b>Report Created</b>	06/14/2017

### ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS, AND RESULTS

Total Gaseous Non-Methane Non-Ethane Organic Carbon by SCAQMD Method 25.1 (GC-TCA)

See attached results and sample information.

**Reviewed By:** 

m

Joan Niertit Principal A.Q. Chemist Laboratory Services

**Approved By:** 

Aaron Katzenstein, Ph.D. Senior Manager Laboratory Services (909) 396-2219

Date Reviewed: 0<u>6/14/17</u>

**Date Approved:** 

Form 2.0

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

Ethane, ppmvC

NMNEOC, ppmvC

-50-

Date(s): 6/1/2017 and 7/13/2017

#### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr. Diamond Bar, CA 91765-4182 MONITORING AND ANALYSIS **REPORT OF LABORATORY ANALYSIS** (Page 2 of 3) Laboratory No. 1714534-13 SUMMA Canister Canister 54205, Furnace Sample **Sample Description** Sample Date 06/01/2017 Received Date 06/01/2017 Analyzed Date 06/06/2017 Total Gaseous Non-Methane Non-Ethane Organic Carbon by SCAQMD Method 25.1 (GC-TCA) MDL MRL Analyte, Unit Result CH4, ppmvC <1 0.5 1 57155 0.5 CO2, ppmvC 1

<1

<1

0.5

0.5

1

1

-51-

Date(s): 6/1/2017 and 7/13/2017



### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr. Diamond Bar, CA 91765-4182

### MONITORING AND ANALYSIS REPORT OF LABORATORY ANALYSIS

(Page 3 of 3)

Laboratory No. 1714534-13

Total Gaseous Non-Methane Non-Ethane Organic Carbon by SCAQMD Method 25.1 (GC-TCA)

### QUALITY CONTROL SUMMARY

<u>CCV1 (CC106783)</u>			Percent	Absolute	QC Limit
Analyte, Unit	Measured	Theoretical	Error	Difference	±5% or ±1
CO, ppmvC	2.15	1.92	11.75	0.23	PASS
CH4, ppmvC	1.99	2.02	1.68	0.03	PASS
CO2, ppmvC	2.37	1.57	51.05	0.80	PASS
Ethane, ppmvC	2.00	2.03	1.48	0.03	PASS
NMNEOC, ppmvC	2.18	2.03	7.50	0.15	PASS
CCV2 (CC135067) Analyte, Unit	Measured	Theoretical	Percent Error	Absolute Difference	QC Limit ±5% or ±1
CO, ppmvC	10130	10100	0.25	25.46	PASS
CH4, ppmvC	9997	9950	0.47	46.97	PASS
CO2, ppmvC	10180	10100	0.76	76.38	PASS
Ethane, ppmvC	10020	9940	0.80	79.47	PASS
NMNEOC, ppmvC	10150	10000	1.54	154.08	PASS
<u>CCV3 (CC106783)</u> Analyte, Unit	Measured	Theoretical	Percent Error	Absolute Difference	QC Limit ±5% or ±1
CO, ppmvC	2.23	1.92	15.90	0.31	PASS
CH4, ppmvC	2.18	2.02	7.71	0.16	PASS
CO2, ppmvC	2.09	1.57	33.21	0.52	PASS
Ethane, ppmvC	2.18	2.03	7.39	0.15	PASS
NMNEOC, ppmvC	2.06	2.03	1.58	0.03	PASS
CCV4 (CC135067) Analyte, Unit	Measured	Theoretical	Percent Error	Absolute Difference	QC Limit ±5% or ±1
CO, ppmvC	10080	10100	0.18	18.19	PASS
CH4, ppmvC	9970	9950	0.20	19.78	PASS
CO2, ppmvC	10140	10100	0.39	39.21	PASS
Ethane, ppmvC	9999	9940	0.59	58.58	PASS
NMNEOC, ppmvC	10120	10000	1.22	122.24	PASS

REFERENCE NO. B17F036

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -52- Date(s): <u>6/1/2017 and 7/13/2017</u>

July 13, 2017 – Source Test

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-53-

Date(s): 6/1/2017 and 7/13/2017

### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182 Page 1 of 2

age i oi z

### MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS

то	Mike Garibay	LABORATORY NO	1718636
	Supervising A.Q. Engineer Source Test Engineering	SOURCE TEST NO	17-343
SAM	IPLE(S) DESCRIBED AS	DATE RECEIVED	07/13/2017
	3 Hexavalent Chromium Trains		
		RULE NO	NA
SAM	IPLING LOCATION		
	Facility ID 10966	REQUESTED BY	Jason Aspell
	Weber Metals, Inc.		
	16706 Garfield Ave.	DATE ANALYZED	7/14/2017
	Paramount, CA 90723		
		DATE REPORTED	7/19/2017

### ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS

Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate (NaHCO3) solution)

	Train 5	Train 15	Train 44
Moisture gain, g	468.6	438.6	0.2
Silica gel% expended	95	95	2
Filter gain, g	0.007	0.0025	-0.0003
Impinger 1 pH	7-8	7-8	9
Impinger 2 pH	7-8	7-8	9
Cr <sup>+6</sup> , ug	0.00	0.02	0.00
Total Cr, ug	0.32	0.30	0.14

Recovery Notes:

Train 5: The impingers contained a significant amount of particulate matter, and the filter was brown and discolored.

Train 15: The impingers contained a significant amount of particulate matter, and the filter was brown and discolored. The filter was buckled and pulled away from teflon filter holder.

Train 44: Field Blank, no probe, no tubing

NOTE: Additional significant figures provided for calculation purposes.

Reviewed By: Na Mon Trinh

Senior A.Q. Chemist Laboratory Services

Approved By for the Aaron Katzenstein, Ph.D.

Senior Manager Laboratory Services (909) 396-2219 Date Reviewed:

7/19/17

Date Approved:

120/17

-54-

Date(s): 6/1/2017 and 7/13/2017

### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182 Page 2 of 2

### MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS

LABORATORY NO 1718636

REQUESTED BY

Jason Aspell

ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate (NaHCO3) solution)

### QUALITY CONTROL

### BALANCE CHECK (MOISTURE GAIN)

Lab No.	Result (g)	Limit (g)	Check Status
B17G069-CCV1	99.9999	±0.0005	Pass
B17G069-CCV2	500.0	±0.2	Pass

### CCV RECOVERIES (CR6)

Lab No.	Results (ppt)	Limit (%)	% Recovery
\$17G033-CCV1	98	90-110	98
\$17G033-CCV2	101	90-110	101
\$17G033-CCV3	107	90-110	107
\$17G033-CCV4	97	90-110	97

### CCV RECOVERIES (TOTAL CR)

Lab No.	Results (ppb)	Limit (%)	% Recovery
S17G028-CCV1	4.71	90-110	94
S17G028-CCV2	4.51	90-110	90
\$17G028-CCV3	4.65	90-110	93
S17G028-CCV4	4.60	90-110	92
S17G028-CCV5	5.05	90-110	101
\$17G028-CCV6	5.44	90-110	109

REF B17G069 S17G033 S17G028

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u>

-55-

1.11		etals, Inc.	Source Tes	N268-1	17-343	
and the second		Paramount, CA 90723	Request I	State of the second	6/28/17	
	Rotar		Control De		N/A	
Analysis/Equipment Requested	Ву	Jason Aspell	Date Equip	ment Needed	7/11/17	
For Compliance, Rule(s)		100.01129.00		And the second second second		
Other (specify)		AB 2588		Facility ID No.	10966	
Dry Ice Needed X (100 POUNDS)			Labora	atory No. 17186	36	
2		AMPLE EQUIPMEN	T ANALYSIS REQU			Cat IP
3 Equipment Reque Two CARB Method 425 train			Analysis l	Requested		Set ID
(NaHCO3, modified with bac	k-end filter			2027-020-01		
positioned before silica impin	iger)	7		Cr+6, moisture		-
		Indin	s Nos . 15	5,74		-
Two Quartz Sampling Probes	F	Canisle	15 Nos . 54	080,54128	154139	-
		Rofere	nce: STP 4	11, Pages. 1	44,145	
Tubing (two sections)		-		0	11042040	-
A 61 Burney Condition			Finad	Gases		-
2- 6 L Summa Canister			Fixed	Gases		
						-
Strains, 3 Cau	ns. 2am	artz probes	s, tulnina			1
Equipment Retu	m	1	. 0			TL
the second se	Winaro . to	ubing, probe				1
rain 15: West F	11marie F	ulawa Drolog				
Vain 44: Amora	I Galla	unt ha tili	0.4			++
		MIGH NO TUBLY	iq			++-
	used	52	9			
	est Furna					
	st Furno	n (e				
Trip Blank						1771
IVIP Blank. IVI) & Total CV	11	5		1		Í
IVID Blank IVID & Total CV IVAIN 5: CONFI	and the local division of the local division	n+2(-03)	, CON+3(-04	.)		I
Trip Blank. CN(1) # Total (v Irain 5 : Cont I Irain 15 : Cont I	(-02); (u (-06); (u	n+2(-03)	, CON1-3(-04 , CON1-3(-0	.). 8)		Ш 
Trip Blank CN(1) # Total (v Drain 5 : Cont 1 Drain 15 : Cont 1 Drain 14 : Cont 1	(-02); (u (-06); (u	014-2(-03) 014-2(-07)	, CON+3(-04 , CON+3(-0	.) 8)		Ī
Trip Blank CN(1) # Total (v Drain 5 : Cont 1 Ivain 15 : Cont 1 Train 14 : Cont 1	(-02), (1 (-06), (1 2 (-10)	01+2(-03) 01+2(-07) , Con+3(-1	(ont 3 (-0	8)		Ш   
TVIP Blank MID # Total (V Main 5: Cont 1 Vain 15: Cont 1 Vain 14: Cont Vip Blank: (-12) Sample Equipment	(-02), (1 (-06), (1 2 (-10)	077+2(-03) 077+2(-07) , Cont-3(-1 AMPLE EQUIPMEN	, COVA-3 (-04 , COVA-3 (-0 1) T CHAIN OF CUSTO For (S/T, Analysis,	8)		
Trip Blank CN(1) # Total (V Irain 5 : Cont 1 Irain 15 : Cont 1 Irain 14 : Cont 1	(-02); (4 (-06); (0 2 (-10) So From	01+2(-03) 01+2(-07) , Con+3(-1	(001+3 (-0 ) T CHAIN OF CUSTO	8) DDY	Tim	e to the second
TVIP Blank MID # Total (V Main 5: Cont 1 Vain 15: Cont 1 Vain 14: Cont Vip Blank: (-12) Sample Equipment	(-02); (4 (-06), (0 2 (-10) s	074-2(-03) 074-2(-07) , CON-3(-1 AMPLE EQUIPMEN	T CHAIN OF CUSTO For (S/T, Analysis,	8) DDY	Tim /4:0	16. C
TVIP Blank (N1) & Total (V (Vain 5: Cont 1 Vain 15: Cont 1 Vain 14: Cont Vip Blank: (-12) Sample Equipment	(-02); (4 (-06); (0 2 (-10) So From	074-2(-03) 074-2(-07) , CON-3(-1 AMPLE EQUIPMEN	T CHAIN OF CUSTO For (S/T, Analysis,	B) Date Received	14:0	0
TVIP Blank CNVI) & Total (V TVAIN 5: CONFI TVAIN 15: CONFI TVAIN 14: CONF VIP BLANK: (-12) Sample Equipment	(-02); (4 (-06); (0 2 (-10) So From	011+2(-03) 011+2(-07) , Cont-3(-1) AMPLE EQUIPMEN To CONTOLO	T CHAIN OF CUSTO For (S/T, Analysis, Cleanup, Not Used) S/T AMAINGIS	<ul> <li>Date Received</li> <li>Date Received</li> <li>D7[12]17</li> </ul>		0
TVIP Blank (N1) & Total (V (Vain 5: Cont 1 Vain 15: Cont 1 Vain 14: Cont Vip Blank: (-12) Sample Equipment	(-02); (4 (-06); (0 2 (-10) So From	074-2(-03) 074-2(-07) , CON-3(-1 AMPLE EQUIPMEN	T CHAIN OF CUSTO For (S/T, Analysis, Cleanup, Not Used)	<ul> <li>Date Received</li> <li>Date Received</li> <li>D7[12]17</li> </ul>	14:0	0
Trip Blank Tain 5: Cont I Vain 5: Cont I Vain 15: Cont I Vain 14: Cont vip Blank: (-12) Sample Equipment	(-02); (4 (-06); (0 2 (-10) So From	011+2(-03) 011+2(-07) , Cont-3(-1) AMPLE EQUIPMEN To CONTOLO	T CHAIN OF CUSTO For (S/T, Analysis, Cleanup, Not Used) S/T AMAINGIS	<ul> <li>Date Received</li> <li>Date Received</li> <li>D7[12]17</li> </ul>	14:0	0
TVIP Blank MID # Total (V Main 5: Cont 1 Vain 15: Cont 1 Vain 14: Cont Vip Blank: (-12) Sample Equipment	(-02); (4 (-06); (0 2 (-10) So From	011+2(-03) 011+2(-07) , Cont-3(-1) AMPLE EQUIPMEN To CONTOLO	T CHAIN OF CUSTO For (S/T, Analysis, Cleanup, Not Used) S/T AMAINGIS	<ul> <li>Date Received</li> <li>Date Received</li> <li>D7[12]17</li> </ul>	14:0	0

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-56-

Date(s): 6/1/2017 and 7/13/2017

SOUTH COAST AIR QU 21865 Copley Dr.	JALITY MANAGEMENT Diamond Bar, CA 91765-4	DISTRICT 182
	RING AND ANALYSIS JABORATORY ANALYSIS	
	(Page 1 of 6)	
To: Mike Garibay	Laboratory No.	1718636-13 to -14
Supervising A.Q. Engineer Source Test Engineering	Requested By	Jason Aspell
	Rule No.	NA
Sampling Location Facility ID 10966	ST No.	17-343
Weber Metals, Inc. 16706 Garfield Ave. Paramount, CA 90723	Report Created	08/02/2017
Percent hydrogen (H2), nitrogen (N2), o J Total Gaseous Non-Methane Non-Ethane	10.1 (GC-TCD) Organic Carbon by SCAQM	I4) by SCAQMD Method D Method 25.1 (GC-TCA
Percent hydrogen (H2), nitrogen (N2), o J Total Gaseous Non-Methane Non-Ethane	xygen (O2), and methane (CF 10.1 (GC-TCD)	I4) by SCAQMD Method D Method 25.1 (GC-TCA
Percent hydrogen (H2), nitrogen (N2), o J Total Gaseous Non-Methane Non-Ethane	xygen (O2), and methane (CF 10.1 (GC-TCD) Organic Carbon by SCAQM	I4) by SCAQMD Method D Method 25.1 (GC-TCA
Percent hydrogen (H2), nitrogen (N2), o J Total Gaseous Non-Methane Non-Ethane See attached re	xygen (O2), and methane (CH 10.1 (GC-TCD) Organic Carbon by SCAQM sults and sample information	I4) by SCAQMD Method D Method 25.1 (GC-TCA
Percent hydrogen (H2), nitrogen (N2), o J Total Gaseous Non-Methane Non-Ethane	xygen (O2), and methane (CH 10.1 (GC-TCD) Organic Carbon by SCAQM sults and sample information	I4) by SCAQMD Method D Method 25.1 (GC-TCA

Form 2.0

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-57-

AGINID	REPO	RT OF LABORATORY A	NALYSIS	5
		(Page 2 of 6)		
aboratory No. Sample Description	1718636-13 Grab, SUM	MA Canister Canister 54080, We	est Furnace	
Sample Date 07/13/20	017	Received Date 07/13/2017		Analyzed Date 07/18/2017
Percent hydrogen	(H2), nitroger	n (N2), oxygen (O2), and metha (GC-TCD)	ane (CH4) l	by SCAQMD Method 10.1
An	alyte, Unit	Result	MDL	MRL
H2,		1.9	0.2	NA
02,	%	3.5	0.2	NA
N2,	%	80.0	0.2	NA
CH	4,%	0.2	0.2	NA
Laboratory No. Sample Description	1718636-13 Grab, SUM	MA Canister Canister 54080, W	est Furnace	
Sample Date 07/13/2	017	Received Date 07/13/2017		Analyzed Date 07/20/2017
Total Gaseous N	on-Methane N	ion-Ethane Organic Carbon b	y SCAQMI	Method 25.1 (GC-TCA)
4.0	alyte, Unit	Result	MDL	MRL
	4, ppmvC	1920	0.5	1
	2, ppmvC	89700	0.5	1
	ane, ppmvC	<1	0.5	1

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-58-

AQMD	M	MITODINC AND ANA		
	REPOR	ONITORING AND ANAL RT OF LABORATORY A		S
		(Page 3 of 6)		
aboratory No.	1718636-14			
ample Description	on Grab, SUMM	1A Canister Canister 54139, Ea	ist Furnace	
ample Date 07/1	3/2017	Received Date 07/13/2017		Analyzed Date 07/18/2017
Percent hydro	gen (H2), nitrogen	(N2), oxygen (O2), and meth (GC-TCD)	ane (CH4) l	by SCAQMD Method 10.1
	Analyte, Unit	Result	MDL	MRL
	H2, %	2.4	0.2	NA
	02,%	0.8	0.2	NA
	N2, %	80.8	0.2	NA
	CH4, %	0.8	0.2	NA
aboratory No. ample Descripti	1718636-14 on Grab, SUMN	MA Canister Canister 54139, Ea	ast Furnace	
ample Date 07/1	3/2017	Received Date 07/13/2017		Analyzed Date 07/20/2017
Total Gaseou	is Non-Methane No	on-Ethane Organic Carbon b	y SCAQMI	D Method 25.1 (GC-TCA)
	Analyte, Unit	Result	MDL	MRL
	CH4, ppmvC	8530	0.5	1
	CO2, ppmvC	103000	0.5	1
	Ethane, ppmvC	<1	0.5	1
	NMNEOC, ppmvC	537	0.5	1

-59-

	ST AIR QUALITY M Copley Dr. Diamond H			Г
South Coast AQMD REI	MONITORING AND PORT OF LABORATO		SIS	
	(Page 4 of 6)	Laboratory N	o. 171863	6-13 to -14
Percent hydrogen (H2), nitro	gen (N2), oxygen (O2), and (GC-TCD)	I methane (CH	4) by SCAQMD	Method 10.1
	<b>OUALITY CONTROL</b>	SUMMARY		
CV1 (CC122586) nalyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
12, %	1.00	0.94	0.06	PASS
2, %	1.11	1.03	0.08	PASS
2, %	1.24	0.96	0.28	PASS
H4, %	1.00	1.01	0.01	PASS
CCV2 (CC73109) malvte, Unit	Measured	Theoretical	Absolute	QC Limit ±0.5%
	NA	NA	NA	NA
12, %	24.55	24.63	0.08	PASS
2, %	4.97	4,93	0.04	PASS
2, % TH4, %	NA	NA	NA	NA
CCV3 (FF130)	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
Analyte, Unit	NA	NA	NA	NA
12, %	1.11	1.00	0.11	PASS
02, %	93.86	93.9	0.04	PASS
82, % CH4, %	NA	NA	NA	NA
CCV4 (CC122586) Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
12, %	1.00	0.94	0.06	PASS
02, %	1.03	1.03	0.00	PASS
12, %	1.13	0.96	0.17	PASS
CH4, %	0.98	1.01	0.03	PASS
CCV5 (CC73109) Analyte, Unit	Measured	Theoretical	Absolute Difference	QC Limit ±0.5%
12, %	NA	NA	NA	NA
02, %	24.63	24.63	0.00	PASS
N2, %	5.02	4.93	0.09	PASS
CH4, %	NA	NA	NA	NA

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-60-

Date(s): 6/1/2017 and 7/13/2017

## SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr. Diamond Bar, CA 91765-4182 MONITORING AND ANALYSIS REPORT OF LABORATORY ANALYSIS (Page 5 of 6) 1718636-13 to -14 Laboratory No. Percent hydrogen (H2), nitrogen (N2), oxygen (O2), and methane (CH4) by SCAQMD Method 10.1 (GC-TCD) QUALITY CONTROL SUMMARY QC Limit Absolute CCV6 (FF130) Analyte, Unit Difference Theoretical ±0.5% Measured NA NA NA NA H2, % PASS 1.00 0.11 1.11 02, % 93.65 93.9 0.25 PASS N2, % NA NA NA NA CH4, % REFERENCE NO. B17G094

-61-

#### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr. Diamond Bar, CA 91765-4182 MONITORING AND ANALYSIS REPORT OF LABORATORY ANALYSIS (Page 6 of 6) 1718636-13 to -14 Laboratory No. Total Gaseous Non-Methane Non-Ethane Organic Carbon by SCAQMD Method 25.1 (GC-TCA) OUALITY CONTROL SUMMARY **OC** Limit Absolute CCV1 (CC106783) Percent Difference Measured Theoretical Error ±5% or ±1 Analyte, Unit 0.00 PASS 1.92 1.92 0.21 CO, ppmvC 0.03 PASS 2.02 1.68 CH4, ppmvC 1.99 0.43 PASS 27.47 2.00 1.57 CO2, ppmvC 0.12 PASS 5.91 1.91 2.03 Ethane, ppmvC 2.03 4.83 0.10 PASS NMNEOC, ppmvC 1.93 Absolute QC Limit Percent CCV2 (CC12628) Difference ±5% or ±1 Theoretical Analyte, Unit Measured Error 1.88 19.44 PASS 1036 1055 CO, ppmvC 16.30 PASS 1052 1068 1.53 CH4, ppmvC 1022 2.01 20.56 PASS 1043 CO2, ppmvC 1044 0.15 1.60 PASS 1046 Ethane, ppmvC 1.00 10.21 PASS 1034 1024 NMNEOC, ppmvC QC Limit Percent Absolute CCV3 (CC106783) Difference ±5% or ±1 Measured Theoretical Error Analyte, Unit PASS 5.51 0.11 2.03 1.92 CO, ppmvC PASS 2.02 2.67 0.05 1.97 CH4, ppmvC 1.57 27.47 0.43 PASS 2.00 CO2, ppmvC PASS 1.93 2.03 4.93 0.10 Ethane, ppmvC 0.59 0.01 PASS 2.03 NMNEOC, ppmvC 2.04 QC Limit Percent Absolute CCV4 (CC135067) Theoretical Error Difference ±5% or ±1 Measured Analyte, Unit 9.87 PASS 10090 10100 0.10 CO, ppmvC 3.23 PASS 9950 0.03 CH4, ppmvC 9947 44.66 PASS 0.44 10100 10140 CO2, ppmvC 9940 0.43 42.26 PASS Ethane, ppmvC 9982 1.16 116.04 PASS 10120 10000 NMNEOC, ppmvC

REFERENCE NO. B17G115

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-62-

Company	Weber M	fetals, Inc.	Source Tes	t No.	17-343
ddress	the second s	Paramount, CA 90723		515 C	6/28/17
asic Equipment Rotary Furnace			Control De	vice	N/A
Analysis/Equipment Re	equested By	Jason Aspell	Date Equip	ment Needed	7/11/17
For Compliance, Rule	o(s)				
Other (specify)		AB 2588		Facility ID No.	10966
Dry Ice Needed X 100 POUNDS)			Labora	17186	3.6
21 (1997) (1997)	5	AMPLE EQUIPME	NT ANALYSIS REQU		
3 Equipmen Fwo CARB Method 4	t Requested/ID #		Analysis I	Requested	Set ID
NaHCO <sub>3</sub> , modified					_
positioned before silic	a impinger)	7	Total Chrome,	Contracting of the local data and the local data an	
			s Nos . 15		6.000
Sampling	Probes		Ers Nos . 54		
		Rafer	Ance: STP 4	11, Pages . 1	99,195
Tubing (two sections)				•	
- 6 L Summa Caniste			Fixed	Clases	
- o L Suitinii Califsi					
1 hours a	0	dia valor	C 1.1.1.1.1.1		
Straive, 3	cans. 2 qu	artz prove	s, tunna		
quipment		12	0		
INNS: Ea	st Furnace, t	ubing, probe			
an 12. Mg	St. Furnace	ruging, probe			
		ank, no tubi	ng		
an 54128:			5		
in 59000	West Furne				
un 54139:	East Furn	ace			
rip Blaur	Cre An I a	-			1
NU14 101a			0	1	ILL
the state of the s	the second se	on+2(-03)			
construction and a second s	the state of the party of the	om 2 (-07)	, fort 3 (-01	6)	
np Blank: (	n+2(-10)	, Cont 3(-	11)		
	12) s	AMPLE EQUIPME	NT CHAIN OF CUSTO	DY	
Sample Equipment Set ID	From	Tel	For (S/T, Analysis, Cleanup, Not Used)	Date Received	Time
T	CSchagen	CA IV	IST	07/12/17 07/13/17 07/14/17	14:00
TL	( Alten V	COLLOS	Analysis	07/13/17	16:30
TIL.	CANNOR	Barry Pater	Analusis	07/14/17	16:30
	D.C. ABANDAYLA	and start	- intranalar -	1×11 · · · · · ·	

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -63 Date(s): <u>6/1/2017 and 7/13/2017</u>

## **APPENDIX D**

Field Data and Lab Data– May 11, 2017 Discarded

Test Nos. 17-339, 17-341 and 17-343 -64-

$\begin{array}{c c c c c c c c c c c c c c c c c c c $		est No.	17-339			Weber				D	ate:	3/11	/17	3
Pro-Test Leak Check:       "Hg vac         Filter:	Sa	ampling	Location:	Am						S	ample 1	rain:	17	<u> </u>
"Hg vac       "Hg vac       "Hg vac         Probe:       O       Off       @       If y vac       Probe:       Off       @       If y vac         Probe:       O       Off       Ø       If y vac       Probe:       Off       @       If y vac         Probe:       O       Off       Ø       If y vac       Probe:       Off       @       Probe:       Off       Probe:       Pass / Fall         Time       Sample       Gas Meter       Viscoty       Temp       Viscoty       Sample       Orifice       Probe:       Probe:       Pass / Fall         3270       1       2.871.721       1       Viscoty       Sample       Orifice       Probe:       Probe:       Pass / Fall         3277       1       2.871.721       1       Viscoty       Sample       Orifice       Probe:       Pass / Fall       Orifice       Probe:       Orifice       Pass / Fall       Orifice       Orifice       Orifice       Orifice       Orifice       Orifice       Orifice       Orifice						Traverse	Source							
Proble         Proble         Proble         Proble         Proble         Proble         Proble         Proble         Pass / Fail           Time         Sample         Gas Meter         Pass / Fail         Proble         Faile         Origo         Proble         Faile         Proble         Faile         Origo         Origo         Origo         Origo         Origo         Origo         Origo         Origo         Ori					2				22 23 2 2 2 2 2 2					
Proble         Proble         Proble         Proble         Proble         Proble         Proble         Proble         Pass / Fail           Time         Sample         Gas Meter         Pass / Fail         Proble         Faile         Origo         Proble         Faile         Proble         Faile         Origo         Origo         Origo         Origo         Origo         Origo         Origo         Origo         Ori													"Hg	vac
Time         Sample         Gas Meter         Stack         Calculated         Probe         Filler         Imp,         Meter Temp,         Vacuum           35%         7/1         28.7         7/1         7/2         7/1						y vac							"Hg	vac
Point Stati 2/37, 2/2         Reading (dcf) Stati 2/37, 2/2         Velocity F         Stati 2/37, 2/2         Temp. (tpp)         Temp. F         <	Pi	tot Tube	e Leak Check:	Pass	))Fail			Pit	ot Tube	Leak Ch	eck:	Pass /	Fail	
Point Stati 2/37, 2/2         Reading (dcf) Stati 2/37, 2/2         Velocity F         Stati 2/37, 2/2         Temp. (tpp)         Temp. F         <	Time	Sample	Gas Meter	Sta	ck		Calculated		Drohe	Eilter	Imp	Mater	Temp	Vacua
*       Statt 203 - 724 (*to)       *       (tps)       Rain       (ch)       TF       'r       (tn)       Out         3 570       11       1       ('to)       570       76       27       4/7       76       27       4/7       76       27       4/7       76       27       104       92       12         4 15       2 87 - 78       73       770       2 57       104       92       12         4 15       2 87 - 78       73       770       2 57       104       92       13         4 10       12       77       12       570       411       112       77       13         4 10       12       327       21       114       12       77       13         4 10       12       327       21       114       12       77       13         4 10       12       327       21       114       12       13       14       12       13         4 10       12       327       21       114       12       14       12       14       14       12       14       14       12       14       14       14       12       14       <		Point												" Hg
3 <sup>2</sup> 72, 11 +15 2 8 <sup>1</sup> . 78 3 11. 73 +30 3 11. 73 +30 3 11. 73 -2.70 +11 -2.70 -41 -112 -7.70 -41 -112 -7.70 -41 -112 -7.70 -41 -112 -7.70 -41 -41 -12 -7.70 -41 -12 -7.70 -41 -41 -12 -7.70 -41 -41 -41 -41 -41 -41 -41 -41				Head			Rate	ΔP.					-	1
# 15       2 89.98       7.70       55       104/92       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       41       112       97       13         #45       7.70       7.70       41       112       97       13         #45       7.70 </td <td>150</td> <td></td> <td></td> <td>("H<sub>2</sub>O)</td> <td></td> <td>1</td> <td>(cfm)</td> <td></td> <td></td> <td>(E)   </td> <td>- AS</td> <td>105.00</td> <td>128,8192</td> <td></td>	150			("H <sub>2</sub> O)		1	(cfm)			(E)	- AS	105.00	128,8192	
+30       311.43       7.70       411       112       97       13         445       327.291       F114er       Comption Sed       4.57       about test       a         400:2       327.291       F114er       Comption Sed       4.57       about test       a         40:2       327.291       F114er       Comption Sed       4.57       about test       a         40:2       327.291       F114er       Comption Sed       4.57       about test       a         40:2       327.291       F114er       Comption Sed       4.57       about test       a         40:2       327.291       F114er       Comption Sed       4.57       about test       a         40:2       327.291       F114er       Comption Sed       4.57       about test       a       a         40:2       20:2       about test       about test       a			11		•		1.		70	39	e destan	the second se		the second se
130       311.43       7.70       41       112       77       13         445       1327.241       Fifter Comption Sed       4.57       0.607.464         400.2       327.241       Fifter Comption Sed       4.57       0.607.464         400.2       12.24       12.24       12.24       12.24       12.24         (Net Vel. Uncor.)       Avg.       Calibration Data       12.24       12.24       12.24         Nozzle Diameter       M2.14       M2.14       M2.14       M2.14       12.24       12.24         Nozzle Diameter No.       M2.14       (Cal: 2/24/17.2)       "HgA       Necorded By:       12.24       12.24         Potentiometer No.       M2.314       (Cal: 2/24/17.2)       Calibration Data       14.24       14.24       14.24       14.24       14.24       14.24       14.24       14.24       14.24       14.24		(243.61)	2 89.98		The set of	F \$ .	RETARINAL IN	7.70	Letter Like	THE SECOND	55	104	92	13
445       327.291       Fifther Comptons, Sed       405.2       360.4em         402.2       327.291       Fifther Comptons, Sed       405.4 of 60.4em         402.2       327.291       405.4 of 60.4 mm       404.4 of 60.4 mm         (Net Vol. Uncorr.)       Avg.       404.4 mm       404.4 mm         K-Factor:       0.568.2       Stack Moisture:       Canister #:       Start       "Hg va         Nozzle Diameter:       //4       *       HgA       Pitot Factor:       Start       "Hg va         Nozzle Diameter:       //4       *       HgA       Pitot Factor:       Start       start       "Hg va         Nozzle Diameter       //4       *       *       HgA       Pitot Factor:       Start       start	+30			4 - MA			-	2.70	1	-	41	112	97	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		THE MAN	SHADES CONTRACT	123133 31	1 23/15		2	C.C.W.L.C.	A BOARD	and the second	124 248	1000000	10.50 (E)	NUMBER OF
40: 2       327. 291       Filter Complem Bed - Fist of a field free         40: 2       327. 291       Filter Complem Bed - Fist of a field free         40: 2       327. 291       Filter Complem Bed - Fist of a field free         40: 2       327. 291       Filter Complem Bed - Fist of a field free         40: 2       4       4       4         40: 2       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4         40: 4       4       4       4	110	2				1.1.1.1.1	1					-		
Image Andres No.       MO 21/H       (Cat:       N/A       )         Gas Meter No.       MO 21/H       (Cat:       3/24/1/2       )		THURSDAY.	207 201	ALC: NOT THE OWNER OF	CRAME HOLD	Elter	57001	0000	2.1		c/	12	- last	Contractor
(Net Vol. Uncorr.)         Avg.           Image: August of the second	40.7	Contraction of the	741.271	A CONTRACTOR	1	11/11	comp	IOM,	sed	- 70	37	9001	164	0.005
(Net Vol. Uncorr.)         Avg.           Image: August of the second							<u></u>	-			11.4-			1.
(Net Vol. Uncorr.)         Avg.           Image: August of the second	201112	3-346	Non- Went St	100	a state of the	Mer all	- See 13 ( 7 ( 2)	S San St		1.1.1.1.1.1	881 St83	1 2362	10.0	Main in
(Net Vol. Uncorr.)         Avg.           Image: August of the second		1					1. X					23		
Nozele Diameter:         M/A         *         Recorded By:         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         *         *         *         Recorded By:         *	A STATE	2010	本部に見ている	<b>化成为在10</b>	THE'	Total Contraction	States of	HELPHOND	中国政治	10772311	Street	かざつけ	1. 18 A 19	Wide ROL
Nozele Diameter:         M/A         *         Recorded By:         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         *         *         *         Recorded By:         *		2.1.1	1.14.96				-		12 1 1 2					
(Net Vol. Uncorr.)       Avg.         (Nozzle Diameter:       M/A         (Calibration Data       Recorded By:         Inclined Manometer       (Cal:         Magnehelic No.       (Cal:         (Cal:       (Zalibration Data         Inclined Manometer No.       (Cal:         Magnehelic No.       (Cal:         (Cal:       (Zalibration)         (Cal:       (Zalibration)         (Cal:       (Zalibration)         (Cali:       (Zalibration)         (Gali:       (Zalibration)         (Gali:       (Zalibration)         (Gali:       (Zalibration)         (Gali:       (Zalibration)	WITTER ALL	Margarian III	AND DESCRIPTION OF THE	0.9907210		The second second	10.21.22.3	100400.000	Carrier Control	C C C C C C C C C C C C C C C C C C C	1 1123	Chickey	The Real Property	CONT
Nozele Diameter:         M/A         *         Recorded By:         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         *         *         *         Recorded By:         *	A CONTRACTOR	on an and a second	provide the second second second	al the second second	100 C	opening and the	A REAL PROPERTY OF	CONTRACTOR IN				Contraction in the local division of the loc	Section Process	1000
Nozele Diameter:         M/A         *         Recorded By:         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         Recorded By:         *         *         *         *         *         *         Recorded By:         *	-	And the second second	the second s	III COMPANY	Contraction of the local division of the loc	A DESCRIPTION OF	CONTRACTOR NO.	Charles and Charles		THE R P. LEWIS CO., LANSING, MICH.	Contraction of the	Concernent of	Concentration of the	
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17	Torrest	The se Street	a second the second second	de la compañía de la	1.000	and the second second	10 - 21 - 210.	and second	COL COL	State of the	of the second	ALC: NO	IN THE R.	C. Lin W.
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17			1977 - R. L.			1	1.2		1.2					
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17	4201	1.2.2.2.2.	and man down in a set	Contraction of the	4 2 8	Mar Harrison	A COLORED	- and a	4421-2-21	112122	(1) (2) (2) (2)	P. 1.1.X	SL.	
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17					1241-0			1.5						1.0
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17	1	1000			- Illinous	Will Street	111	mere	3000000	- They	in a second	Sec. 2	A MARINE I	1
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17												,		
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:         Nozzle Diameter:       MA         Magnehelic No.       (Cal:         Inclined Manometer       (Cal:         Nozzle Diameter:       (Cal:         Magnehelic No.       (Cal:         Ocalibration Data       (Cal:         Inclined Manometer       (Cal:         (Cal:       )         Potentiometer No.       NO 3/4         (Cal:       )         Gas Meter No.       NO 7/14         (Cal:       2/291/17	Contraction	and the second	Connected and	100 102	Concernant and	Trees selling	Willing and	Semi-ale	Si Gue Da	and then the	and and and	Marth 12	C. Salar	1212/22
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       MA       "       Recorded By:       Pitot Factor;       Start:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       Start:       Start:       Start:       "Hg val         Calibration Data       "HgA       "HgA       "HgA       "HgA       "HgA       "Stack       Start:       Start:       Start:       Start:       "Hg val         Inclined Manometer       (Cal:       N/A       "HgA       "HgA       "HgA       "Stack       Stack       Stack       Stack       Dimensions         Potentiometer No.       NO 3/H       (Cal:       )       (Cal:       )       Stack       Dimensions         Gas Meter No.       NO 7/H       (Cal:       3/2/1/17)       Image: Stack       Stack       Stack       Stack	60-1010 ( La 14	. 1			CCP NOTICE	CONTRACTOR OF	1		the I have not a second	A CONTRACTOR OF THE		Contraction of the local division of the loc	Contraction of the	
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       MA       "       Recorded By:       Pitot Factor;       Start:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       Start:       Start:       Start:       "Hg val         Calibration Data       "HgA       "HgA       "HgA       "HgA       "HgA       "Stack       Start:       Start:       Start:       Start:       "Hg val         Inclined Manometer       (Cal:       N/A       "HgA       "HgA       "HgA       "Stack       Stack       Stack       Stack       Dimensions         Potentiometer No.       NO 3/H       (Cal:       )       (Cal:       )       Stack       Dimensions         Gas Meter No.       NO 7/H       (Cal:       3/2/1/17)       Image: Stack       Stack       Stack       Stack	No. of Concession, Name	Trails in the	S	ILIZASICIMAL	And in case of the	Colorest Ch. S. C.	E historical dis	Let 10 million	Conversion of	a looke they	Constant of the local division of the local	Concernition of	Contraction of the	ALC: NOT THE OWNER OF
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       MA       "       Recorded By:       Pitot Factor;       Start:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       Start:       Start:       Start:       "Hg val         Calibration Data       "HgA       "HgA       "HgA       "HgA       "HgA       "Stack       Start:       Start:       Start:       Start:       "Hg val         Inclined Manometer       (Cal:       N/A       "HgA       "HgA       "HgA       "Stack       Stack       Stack       Stack       Dimensions         Potentiometer No.       NO 3/H       (Cal:       )       (Cal:       )       Stack       Dimensions         Gas Meter No.       NO 7/H       (Cal:       3/2/1/17)       Image: Stack       Stack       Stack       Stack	the means	Sar Ma	Section of the section of the	110526101			CONTRACTOR OF THE	NAME OF TAXABLE	1999 1993		- <u>- 0</u>	STORE STOR	CP 12: CL P	1
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       MA       "       Recorded By:       Pitot Factor;       Start:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       Start:       Start:       Start:       "Hg val         Calibration Data       "HgA       "HgA       "HgA       "HgA       "HgA       "Stack       Start:       Start:       Start:       Start:       "Hg val         Inclined Manometer       (Cal:       N/A       "HgA       "HgA       "HgA       "Stack       Stack       Stack       Stack       Dimensions         Potentiometer No.       NO 3/H       (Cal:       )       (Cal:       )       Stack       Dimensions         Gas Meter No.       NO 7/H       (Cal:       3/2/1/17)       Image: Stack       Stack       Stack       Stack	7			-					-					
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       N/A       "       Recorded By:       Pitot Factor:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       "Hg val         Static Pressure in Stack:       +1-       "HgA       "HgA       "HgA       "HgA       "HgA         Inclined Manometer       (Cal:       N/A       (Cal:       N/A       "HgA       "HgA         Pitot Tube No.       (Cal:       (Cal:       )       (Cal:       )       "Stack       Stack         Potentiometer No.       NO 3/H       (Cal:       )       (Cal:       )       (Cal:       )         Gas Meter No.       NO 7/H       (Cal:       3/24/17       )       (Cal:       )	立ちりした	Matchildure	ange sterrich	and the second					出之一到時		Santa L	(Internet)	ALL CONTRACTOR	(Televis
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       N/A       "       Recorded By:       Pitot Factor:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       "Hg val         Static Pressure in Stack:       +1-       "HgA       "HgA       "HgA       "HgA       "HgA         Inclined Manometer       (Cal:       N/A       (Cal:       N/A       "HgA       "HgA         Pitot Tube No.       (Cal:       (Cal:       )       (Cal:       )       "Stack       Stack         Potentiometer No.       NO 3/H       (Cal:       )       (Cal:       )       (Cal:       )         Gas Meter No.       NO 7/H       (Cal:       3/24/17       )       (Cal:       )								(						
(Net Vol. Uncorr.)       Avg.         K-Factor:       0.5682       Stack Moisture:       Canister #:       Start:       "Hg val         Nozzle Diameter:       N/A       "       Recorded By:       Pitot Factor:       "Hg val         Barometric Pressure:       30.1       "HgA       "HgA       "Ecorded By:       Start:       "Hg val         Static Pressure in Stack:       +1-       "HgA       "HgA       "HgA       "HgA       "Inclined Manometer       "HgA         Inclined Manometer       (Cal:       N/A       "HgA       "HgA       "HgA       "Inclined Manometer       Stack       Stack<	A.W. 3.10	et dial	ERRY BROWLING IN	Mary -	And I want	1.11.2-5.11.2	A COLOR	Sara Ville	COLUMN 1	1	Train L State	192000	N COLUMN	12/1/2
K-Factor: $O.5682$ Stack Moisture:       Canister #:       Start:       "Hg var         Nozzle Diameter: $M/A$ "       Recorded By:       Pitot Factor:       "Hg var         Barometric Pressure: $\overline{30.1}$ "HgA       "HgA       "Recorded By:       Start:       "Hg var         Static Pressure in Stack: $+1-$ "HgA       "HgA       "HgA       "Recorded By:       Start:       "Hg var         Inclined Manometer       (Cal:       N/A       (Cal:       N/A       "HgA       "Stack       Stack       Stack       Stack       Dimensions       Stack       Stack       Stack       Stack       Dimensions       Stack	11000	-		Contraction of the		the second second	100100000			V. Names of the local distance of the local	And and a state of the second			
K-Factor: $O.5682$ Stack Moisture:       Canister #:       Start:       "Hg var         Nozzle Diameter: $M/A$ "       Recorded By:       Pitot Factor:       "Hg var         Barometric Pressure: $\overline{30.1}$ "HgA       "HgA       "Recorded By:       Start:       "Hg var         Static Pressure in Stack: $+1-$ "HgA       "HgA       "HgA       "Inclined Manometer       "Inclined Manometer       "Inclined Manometer       "Inclined Manometer       "Inclined Manometer       Stack       Stack       Stack       Stack       Stack       Stack       Dimensions         Potentiometer No.       NO 31/4       (Cal: $3/2 \cdot 4/17$ )       Inclined Manometer       Stack       Dimensions         Gas Meter No.       NO 71/4       (Cal: $3/2 \cdot 4/17$ )       Inclined Manometer       Incl										_				
Nozzle Diameter:       N/A       *         Barometric Pressure:       30.1       * HgA         Static Pressure in Stack:       +1-       * HgA         Calibration Data       * HgA         Inclined Manometer       (Cal:       N/A         (Cal:       )         Nozzle Diameter       (Cal:         (Cal:       )         (Gas Meter No.       N/0 7/H         (Cal:       )/2/2/1/7	(Net Vol.	Uncorr.)		Avg.	1.0	1.1								
Nozzle Diameter:       N/A       *         Barometric Pressure:       30.1       * HgA         Static Pressure in Stack:       +1-       * HgA         Inclined Manometer       (Cal:       N/A         Magnehelic No.       (Cal:       )         Pitot Tube No.       (Cal:       )         Potentiometer No.       (Cal:       )         (Cal:       )       (Cal:       )         Gas Meter No.       NO 71H       (Cal:       )         (Cal:       )       (Cal:       )         (Cal:       )       (Cal:       )         (Gas Meter No.       NO 71H       (Cal:       )         (Cal:       )       (Cal:       )         (Gas Meter No.       NO 71H       (Cal:       )	K-Eact	~ /	0 6600	Stock	Moietuu	· • ·	C	anieter t			Star	-	-	Hava
Barometric Pressure:       30.1       "HgA       Pitot Factor:         Static Pressure in Stack:       +1-       "HgA       "HgA         Calibration Data       "HgA       "HgA         Inclined Manometer       (Cal:       N/A       )         Yetot Tube No.       (Cal:       )       (Cal:       )         Potentiometer No.       NO 314       (Cal:       )         Gas Meter No.       NO 714       (Cal:       )         Gas Meter No.       NO 714       (Cal:       )	N-I acit	n	- 30 0g	olaun	NOIStal	· · ·				-	500			.ga.
Barometric Pressure: <u>70.7</u> * HgA Pitot Factor: Static Pressure in Stack: +/- * * HgA * HgA Calibration Data * H2O Calibration Data * H2O * HgO *	Nozzle	Diamet	er: NA				R	ecorded	By: +	4	-			
Calibration Data         Inclined Manometer       (Cal:       N/A       )         Magnehelic No.       (Cal:       )       )         Pitot Tube No.       (Cal:       )       )         Potentiometer No.       NO 314       (Cal:       )         Gas Meter No.       NO 714       (Cal:       )			ssure 3	01		HaA	Pi	tot Facto	or				10 C	
Calibration Data         Inclined Manometer       (Cal:       N/A       )         Magnehelic No.       (Cal:       )       )         Pitot Tube No.       (Cal:       )       )         Potentiometer No.       NO 314       (Cal:       )         Gas Meter No.       NO 714       (Cal:       )			in Stack: +	1			4.0			_		1.0		
Inclined Manometer       (Cal: N/A)         Magnehelic No.       (Cal: )         Pitot Tube No.       (Cal: )         Potentiometer No.       NO 3/4         (Cal: )       )         Gas Meter No.       NO 7/4         (Cal: )       )	Static P	ressure	IN SLACK. T	/			120	1. Same	0.0		~	5	7	1.41
Inclined Manometer       (Cal: N/A)         Magnehelic No.       (Cal: )         Pitot Tube No.       (Cal: )         Potentiometer No.       NO 3/4         (Cal: )       )         Gas Meter No.       NO 7/4         (Cal: )       )			Calibration D	ata		24.3		1			1.1		1	
Magnehelic No.       (Cal:       )         Pitot Tube No.       (Cal:       )         Potentiometer No.       NO 3/4       (Cal:       )         Thermocouple No.       (Cal:       )       (Cal:       )         Gas Meter No.       NO 7/14       (Cal:       )       (Cal:       )	Inclined	Manon	CONTRACTOR OF A DESCRIPTION OF A		Cal	NI/A	1	1.10	V	V	N			
Pitot Tube No. (Cal: ) Potentiometer No. <u>NO 3/4</u> (Cal: ) Thermocouple No. (Cal: <u>3/24/17</u> ) Gas Meter No. <u>NO 7/14</u> (Cal: <u>3/24/17</u> )						19//4		1	1		<u> </u>	- I I		
Prior Tube No. (Cal: ) Potentiometer No. $\underline{NO 3/4}$ (Cal: $\underline{3/24/17}$ ) Thermocouple No. (Cal: $\underline{3/24/17}$ ) Gas Meter No. $\underline{NO 7/4}$ (Cal: $\underline{3/24/17}$ )			-						1	1	8 8	4	Sta	ck
Potentiometer No. <u>NO 314</u> (Cal: <u>3/24/17</u> ) Thermocouple No. (Cal: _) Gas Meter No. <u>NO 714</u> (Cal: <u>3/24/17</u> )					Cal:		)		1			Sec. 1		
Thermocouple No.         (Cal:         )           Gas Meter No.        /0 7/14 (Cal:        )	Potenti	ometer	NoNO3	14 (	Cal: 3	124/17	)	+	1	/		diam.	20	
Gas Meter No. <u>NO 714</u> (Cal: <u>3/24/17</u> )	Thermo	couple					)			8. J.				
						124/17			-	-+		1	5	7
			144 119			1-1/11		1	1				9	1
	Gas Me		ntor:	00.00	1								and the second se	

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-65-

		17-339 Location:				Metals				ate: ample T	5/11		1
	amping	Location.	ITM			Source	4		0	ample 1	ant.	30	
F	ilter: robe: 🕖	Leak Check: cfm @ cfm @ cfm @ Leak Check:	15	"Hg	vac vac	Source	Po Filt Pro	st-Test L ter: obe: . Q ot Tube	016	cfm @	15	"Hg v "Hg v Fail	/ac /ac
Time	Sample Point	Gas Meter Reading (dcf)	Sta Velocity Head	Ck Temp. °F	Velocity (fps)	Calculated Sampling Rate	Orifice	Probe Temp. *F	Filter Temp. °F	Imp. Temp. °F		Temp. F	Vacu * H
-12		Start 32 7.527	("H <sub>2</sub> O)		1.4	(cfm)	("H <sub>2</sub> O)	F	- F	1.	In	Out	
512	Constant of Local Division	11 00	CORE AND	Contraction of the local division of the loc	CALCULATION DO		2.80	Contraction of the	Contraction of the	41	104	98	15
+ 15	21.11	340.82	22.2	CONTRACTOR I	Partit - 4	and the second	2.8	11 11 12	Art Course	40	100		15
	21.4	346.426	SALENEAUS	Carlo a carlo	Constanting of the	d brokener	2.8	5.7.0.00 (Arriston and		42:	105	98	15
545	2000		2	and the	C avres son	S.C. M. Com (T.	1111	Constant and the	ALCOS CO. S. A.		Market a	1000	Contraction of the
+60	71210200	STOLE AND AND	N.	Statute and	CARDING STAT	1. Contraction of the		STI CLARK	a martine a	41000	Constraint of the	- Annena	Contraction of the local division of the loc
110-01	- 1	DW. CARTANES	STE OF		HALSIN	Marine Providence	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1991100	CHE BOOK	Production of the	Series State	1000	10.00
Constant of	DALL.	And and the state of	inter series	Margare Margare	Second Second	Table Street of	and a strength of	(Washinger	5.05	224 - 24.3	Contractory.	Distance of	No.
CO. COMPLEX.	10021141	A SOL DAY AND A SOL DAY	Contraction and	12 M 12 M	LO DEO TA	CALIFORNIA COLUMN	CALCULATION OF	Concentration (State	ALC: NOT	A.S.	COLUMN TO A	Part and a	1000
04.4.20-91	V CERCENT	NAMES OF THE OWNER	R R NO DON'S	Distance of	DI HOUSE	And Address of the	10125-01020	1000000000	A Designation	AUCTORNING.	THE ROOM	COOPERS	10.07
		11.	the state of the s	and the second s	7.24	and the second s	1.1	and the second second second	ALC: NOT THE OWNER OF THE OWNER OWNER OF THE OWNER OWNE OWNER OWNE	and the last of the	1 North Contraction		-
	CONTRACTOR IN	AND A STATE	1000	States of the	arensed.		Contraction of the	EISHIN!	11111 (Cold	1.742.91	196020	Col et al. Y	intrela
-	1. 1. 1.							-	1				-
1200	1 25, 26		100	2.115.13	- 25 -	Development		Soft all a		N. T. I	14.420-50	2414-0	1.1.1.1
	- 5.5 -			124 11	1			- T - 6				1	1.1
Stall 2	- CARLON	No. of Street,		Tatan States	17.24 \H	-10 id.	Grand R.	-		KID OF	S	A Startes	and and
141.2		14	10.00	- · · ·	2	1. 19 St					1	1.1	
12-1-1	Ser Surd		1 Alterio	And the	41.00	Children and	the second	(instant)	2 Calmer	(1) ST	Trans.	1 cente	1.87
	10 M		1 P.	<b>*</b> ***	+.+.		Score of		1	1000	3		14
			1.55	100.33	「「「「	Station of the	2001223	and the	Sel Here	1. Miles	》41日,分下	1200	11-202
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		7 - N		11-11	General States	(13 H)				-		1	
State (	<b>学校的任何</b> 。	208 B. 18		Section 1	C. S. C. Ballins	20023400	40.41 H.C	小小	128-14 J		g dispersion	CHINA	1 AL
	7.13	<ul> <li>UEX.345(c)</li> </ul>		11-2	-	1. 1. 1. 1. 1.			-	-		-	-
11		Terrar States	- the raise		N 34-16	and setting the	1.000	and the state	State of the	11-2-2-2-5-	21,300		1.0
1.12	1.1.1	1 Y 1	1.3.	1. 94				and the second second	AT A PROPERTY AND		1.		
10	12. 1920		Children and	Arrist.	STATISTICS S	and the second		Constant and the	11	ALC: NO	- 155 010	Contraction of the	To and
1.2	1.00	Sec. St.		A.	A	Con the						-	
(Net Vol	Uncorr.)	1924.50	Avg.	2	-					· · · · · · ·	1.16		
Nozzle Barom Static I Incline Magne	Diamet etric Pre Pressure d Manor helic No	ssure: in Stack: + Calibration D neter	<u>, (</u> /:	Cal:	HgA	R	anister # ecorded tot Factor	By:		Start	dam		Hg va
Potent Therm	ube No. iometer ocouple eter No.			Cal: Cal: <u>3/</u> Cal: Cal: <u>_</u>	124/17	) ) ) )	-	-	-		diam.		nension

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-66-

Date(s): 6/1/2017 and 7/13/2017

renue, Paramount, CA 90723 ce, Die Lubricant Area Eric Padilla Rule Development	Request Date Control Device Date Equipment Needed	5/4/17 N/A 5/11/17
Eric Padilla		
	Date Equipment Needed	5/11/17
Rule Development		and the second se
Rule Development		
trate per endpointen.	Facility ID No	10966
	Cost in	12514
SAMPLE EQUIPMENT A	Analysis Requested	Set ID
back-end Tracis N.	17 22 70	
the second se		4134,135
and the second se		
iger)	www.wyumi, ung 10	IVUISTUIR.
and the second sec	0	
Note: We will also at	tempt to get a sample of the die lubri	cant for analysis.
Train30: 9	sample, tubing, no	proloe
	· · · · · · · · · · · · · · · · · · ·	and the second se
		at the second
Cont 2: 04 Con	+3:-05 Cont 1:-	-11
1.000	#3:-07 (putl:	-12
	+3:-09 CONHI:	-13
	back-end Trains Nos Roference: Atholysis Rec ( hexavalent sample Doc Note: We will also at Train 17: S Train 17: S Train 17: S Train 17: S Train 17: S Court 2: -04 Court Dut 2: -06 Court	SAMPLE EQUIPMENT ANALYSIS REQUEST Malysig. Requested back-ond Trains Nos 17, 22.30 Rofanence: Blue Book 41 por Analysis Requested: Total Chiro / hexaval ent chromium, and % ser) Sample Doctes May 11, 2017 Note: We will also attempt to get a sample of the die tubri Train 17: Sample, Hubing, no p Train 30: Sample, Hubing, no Train 30: Sample, Hubing, no Train 30: Sample, Hubing, no Court 2: 04 Court 3: -05 Court 1:- Dut 2: -06 Court 3: -07 Court 1:-

E	<b>T</b> -	Classes Not Llord)	Data Bassiwad	Time
Prop	10	Cicanup, Not Used)	Date Received	the second se
Samon	Ship Elan	S/T	05/11/1+	07:20
Parys Can	C.Schiver	Recovery	05/12/17	08:37
Schalh	Mr. Sm.		05/12/17	17:10
and and the second s	0			
		Repose Ostros Car	Same of the Eline St T Person State St T	From To Cleanup, Not Used) Date Received Samp Atterna S/T 05/11/17 Persecution Recovery 05/12/17

admiller of the

Test Nos. 17-339, 17-341 and 17-343

-67-

Date(s): 6/1/2017 and 7/13/2017

## SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182

Page 1 of 2

### MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS

TO Mike Garibay	LABORATORY NO	1712514
Supervising A.Q. Engineer		
Source Test & Engineering	SOURCE TEST NO	17-339
SAMPLE(S) DESCRIBED AS	DATE RECEIVED	05/12/17
3 Hexavalent Chromium Trains	Wanger-1 In	
	RULE NO	NA
SAMPLING LOCATION		
Facility ID 10966	REQUESTED BY	Eric Padilla
Weber Metals		
16706 Garfield Ave.	DATE ANALYZED	5/12/2017
Paramount, CA 90723		
	DATE REPORTED	5/17/2017

## ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS

Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate(NaHCO3) solution)

Train 17	Train 22	Train 30
17.0	0.0	13.8
75	15	1
-0.0016	-0.0009	0.0035
9	9	9
9	9	9
0.51	0.03	0.01
	17.0 75 -0.0016 9 9	17.0 0.0 75 15 -0.0016 -0.0009 9 9 9 9

Recovery Notes:

Train 17: Teflon tape severely occluded ball side of the tubing adapter.

Train 22: Field Blank. Particulates stuck to the inside of impinger walls for all 3 impingers.

Train 30: The contents of Impinger 3 had a very musty smell.

NOTE: Additional significant figures provided for calculation purposes.

Reviewed By:

Joan Niertit, Principal A.Q. Chemist Laboratory Services

05/18/17 5/19/17 Date Reviewed:

Approved By:

Aaron Katzenstein, Ph.D. Senior Manager Laboratory Services (909) 396-2219

Date Approved:

-68-

Date(s): 6/1/2017 and 7/13/2017

### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT 21865 Copley Dr., Diamond Bar, CA 91765-4182 Page 2 of 2

### MONITORING & ANALYSIS REPORT OF LABORATORY ANALYSIS

LABORATORY NO 1712514

REQUESTED BY

Eric Padilla

### ANALYTICAL WORK PERFORMED, METHOD OF ANALYSIS AND RESULTS Moisture and Hexavalent Chromium by CARB 425 (Sodium Bicarbonate(NaHCO3) solution)

### QUALITY CONTROL

### BALANCE CHECK

Lab No.	Result (g)	Limit (g)	Check Status
B17E093-CCV1	100.0002	±0.0005	Pass
B17E093-CCV2	500.0	±0.2	Pass

### CCV RECOVERIES

Lab No.	Results (ppt)	Limit (%)	% Recovery
S17E037-CCV1	101	90-110	101
S17E037-CCV2	101	90-110	101
S17E037-CCV3	103	90-110	103
S17E037-CCV4	102	90-110	102
S17E037-CCV5	100	90-110	100

REF B17E093 S17E037

 Test Nos. <u>17-339, 17-341 and 17-343</u>
 -69 Date(s): <u>6/1/2017 and 7/13/2017</u>

## **APPENDIX E**

**Equipment Calibrations** 

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-70-

Date(s): 6/1/2017 and 7/13/2017

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT DRY GAS METER CALIBRATION WORKSHEET

Page 3

DATE : PERFORMED BY: March 24, 2017 W Stredwick

DRY GAS METER COEFFI CI ENT CALCULATI ONS

STANDARD DRY GAS METER I D#: 7812470 DRY GAS METER N0714 With Coefficient of 1.0000 U/ ( TEMP TRIAL CFM U/C TEMP H2O Cor r ect ed H2O Corrected COEF AVE: O/ERALL FI owRat e FI owRat e FI owRat e FI owRat e 1 1/4 0.3168 74 1. 2 0. 3089 0.3188 74 0.8 0.3105 0.9950 0.9960 1.0024 e. 2 1/4 0.3158 74 1. 2 0.3079 0.3158 74 0.8 0.3076 1.0010 P. 3 74 0. 3079 0.3103 1/4 1. 2 0. 3186 74 0.8 0.9922 0. 3158 e. 1 1/2 0.5311 2.8 0.5316 74 1.88 1.0012 74 0.5198 0.5192 1.0145 ۳. 2 1/2 0.5283 74 2.8 0.5172 0.5267 74 1.88 0.5144 1.0053 ۳ 3 1/2 0.5472 74 2.8 0.5356 0.5289 74 1.88 0.5165 1.0369 F. 1 3/4 0.7782 74 5.2 0.7662 0.7843 74 3.6 0.7692 0.9960 0.9986 ۳ 2 3/4 5. 2 0.7846 74 0.7879 74 0.7727 0.9997 0.7725 3.6 P. 3 3/4 0.7861 74 5. 2 0.7740 0.7890 74 3.6 0.7739 1.0002 F. . 1 1.0097 74 1.0033 1.0157 74 6.05 1.0012 1.0006 1 9 1.0021 r. ۳ 2 1.0096 74 9 1.0032 1.0177 74 6.05 1.0041 0. 9991 1 e. r. 3 74 6.05 1 1.0130 74 9 1.0066 1.0189 1.0052 1.0013

CORRECTI ON FACTOR:

1.0024

F

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-71-

Date(s): 6/1/2017 and 7/13/2017

### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT DRY GAS METER CALIBRATION WORKSHEET

DATE: 5/23/2017

PERFORMED BY: W.Stredwick

### DRY GAS METER COEFFICIENT CALCULATIONS

DRY GAS METER ID : N0715

Т	RIAL	CFM	U/C FlowRate	TEMP	H2O	Corrected FlowRate		TEMP	H2O	Corrected FlowRate	COEF	AVE:	OVERALL
•	1 2 3	1/4 1/4 1/4	0.2976 0.1764 0.2959	74 74 74	1.1 1.1 1.1	0.2904 0.1721 0.2887	0.2969 0.2948 0.2941	74 74 74	0.7 0.7 0.7	0.2894 0.2874 0.2867	1.0032 0.5988 1.0072	0.8697	0.9910
* * *	1 2 3	1/2 1/2 1/2	0.5498 0.5500 0.5496	74 74 74	2.2 2.2 2.2	0.5380 0.5381 0.5377	0.5351 0.5350 0.5355	74 74 74	1.975 1.975 1.975	0.5233 0.5232 0.5237	1.0280 1.0286 1.0268	1.0278	
•	1 2 3	3/4 3/4 3/4	0.7928 0.7907 0.7907	74 74 74	5.6 5.6 5.6	0.7822 0.7800 0.7801	0.7697 0.7678 0.7668	74 74 74	3.85 3.85 3.85	0.7561 0.7543 0.7533	1.0345 1.0342 1.0355	1.0347	
•	1 2 3	1 1 1	1.0267 1.0289 1.0302	74 74 74	9.6 9.6 9.6	1.0227 1.0249 1.0262	1.0046 1.0033 1.0052	74 74 74	6.55 6.55 6.55	0.9934 0.9921 0.9939	1.0295 1.0331 1.0324	1.0317	

DRY GAS METER ID :

N0715

CORRECTION FACTOR: 0.9910

Test Nos. <u>17-339, 17-341 and 17-343</u>

-72-

of The	eter ST ermomet ture So	er #	): <u> </u>					librat Sem	Date ion By ion Per iannual monthly Other	riod:
			Lead STQC#_	Wire C030	) <u>/</u>		Lead STQC#_	_		
Temp.*	A		В		)100	В		(B-A	.)100	
Sensor STQC#	Ref. Temp.	Ch#1	Ch#2	Ch#1	Ch#2	Ch#1	Ch#2	Ch#1	Ch#2	COMMENTS
	211	2.5		C.A.						
10/04	34	35	35	4 4						
NO108 40113	34	35	35							· · · ·
10104	229	287	207				40%),			
10108	229	225	227			· /				· · · · · · · · · · · · · · · · · · · ·
40113	229	227	227					*		
10104	608	600	601						905   55	
NU108	608	603	603					1		
40113	608	602	602	11						
		Α.		d.	•					
4		No.	19		1					
				ж. + ж <sub>ел</sub>		•				
			1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -							
			[			-				
						10.17				
	mperati			8						

Test Nos. <u>17-339, 17-341 and 17-343</u>

-73-

Field M Ref. Th Tempera	deter S nermome ature So	TQC# ter # ource(		03014 11 08	Date: <u>4-76-1</u> Calibration By: <u>w.s</u> Calibration Period: Semiannual Bimonthly Other						
			Lead STQC#_	Wire	_		Lead STQC#_	Wire		• •	
Temp.*			в	(B-A A	)100 **		В	(B-A A	)100 **		
Sensor STQC#		Ch#1	Ch#2	Ch#1	Ch#2	Ch#1	Ch#2	Ch#1	Ch#2	COMMENTS	
10102	32		32			33	33				
0102	215	214				214	214			÷	
0102	655	655	656			655	656				
								,			
						-					
			1.1.1								
										•	
									·		
				-							

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -74- Date(s): <u>6/1/2017</u> and <u>7/13/2017</u>

Ref. T	Meter S hermome ature S	eter #	: <u>AST</u> s): <u>Joka</u>	0314 0314	Date: 3-24-17 Calibration By: <u>US</u> Calibration Period: Semiannual <u></u> Bimonthly Other					
			Lead 	l Wire	_		Lead STQC#_	l Wire		
Temp.*	A		В	(B-A	)100		В		)100	
Sensor STQC#	Ref. Temp.	Ch#1	Ch#2	Ch#1	Ch#2	Ch#1 Ch#2	Ch#2	A Ch#2 Ch#1	** Ch#2	COMMENTS
10102	32	32	32			32	32			
20108	33	33	33			33	33			
50111	33	33	33			33	33			
20202	33	33	33			33	33			
0112	33	33	33			33	32			
10102	211	211	212			212	212			
20108	211	211	211			211	211			
1110	211	211	211			211	211			
0202	212	215	214			2/2	212			i.
0112	212	211	211			212	211			
0102	612	611	612			611	111			
	611	610	611			612	611			
1110	612	611	611			612	612			- -
202	611	611	611			612				
112 (	e12	012				612				
			6				~ 1			

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u> -75- Date(s): <u>6/1/2017</u> and <u>7/13/2017</u>

Field Me Ref. The Temperat	rmome	ter #	: <u>AST</u> (s): <u>Jæ</u> r		343	, ,	c	alibra Se	tion tion F	nte: <u>3-24-17</u> By: <u>45</u> Period: Hy
				0314 Wire				315		
(F	-		STQC#_	, wille	_		STQC#	d Wire	_	
Temp.*	A		В	(B-A A	)100		В	(B-2	)100	
Sensor I STQC# 7	Ref. Temp.	Ch#1	Ch#2	Ch#1	Ch#2	Ch#1	Ch#2	Ch#1	Ch#2	COMMENTS
10102	32	32	32			32	32			
	33	33	33			33	33			
	33	33	33			33	33			
	33	33	33			33	33			
CO112	33	33	33			33	32			
·	211	211	212			212	212	-		
)	-11	211	211			211	211			
2.11	12	215	211			211	211			
	12	211	211			2/2	212			Ĩ,
						40	6/1			
10/02 6	12	611	612			611	611			
0108 6	(1	610	611			612	611			
0111 6	12	611	611			612	612		•	•
0202 6							612			
112 61	21	012	611				611			
		_								
										£ e.

Test Nos. <u>17-339</u>, <u>17-341 and 17-343</u> -76- Date

Date(s): 6/1/2017 and 7/13/2017

## **APPENDIX F** Copy of Furnace Permits

-77-

Date(s): 6/1/2017 and 7/13/2017

### Furnace No. 337

Section D Page 34 Facility ID.#: 10966 Revision #: 7 Date: June 30, 2017

## FACILITY PERMIT WEBER METALS INC.

## PERMIT TO OPERATE

Permit No. G40157 A/N 580278

### Equipment Description:

Pre-Heat Furnace, Rotary Hearth Type, Titanium Billets, Custom Made, 26'-0" Dia. x 7'-0" H., with Eight Bloom Engineering Model 1480-035 Natural Gas-Fired Burners, 12 MMBTU/hr Total.

### Conditions:

- Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below. [Rule 204]
- This equipment shall be properly maintained and kept in good operating condition at all times. [Rule 204]
- The NOx concentration, on a dry basis corrected to 3% oxygen, shall not exceed 40 parts per million by volume (ppmv).

[Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]

- A non-resettable totalizing gas meter shall be installed and maintained in the fuel supply line to the furnace. [Rule 1303(b)(2)-Offsets; Rule 1401; Rule 3004(a)(4)-Periodic Monitoring]
- The amount of natural gas fuel consumed by this furnace and those furnaces associated with Permits to Operate 580276, 580277 and 580279 shall not exceed 7,678,000 standard cubic feet in any one calendar month. [Rule 1303(b)(2)-Offsets; Rule 1401]
- Metal contaminated with rubber, plastics, paper, rags, oil, grease, or similar smoke-producing material shall not be charged to this furnace.

[Rule 401, Rule 1303(a)(1)-BACT]

Records shall be maintained to demonstrate compliance with conditions 3 and 5. The records shall be kept on file for at least the last five years and be made available to SCAQMD personnel upon request.

[Rule 1303(b)(2)-Offsets; Rule 1401; Rule 3004(a)(4)-Periodic Monitoring]

-78-

Date(s): 6/1/2017 and 7/13/2017

Section D Page 35 Facility LD.#: 10966 Revision #: 7 Date: June 30, 2017

## FACILITY PERMIT WEBER METALS INC.

Emissions And Requirements:

- This equipment is subject to the applicable requirements of the following rules and regulations: CO: 2000 PPMV, Rule 407 PM: 0.1 GR/SCF, Rule 409

  - PM: Rule 404, See Appendix B for emission limits

-79-

Date(s): 6/1/2017 and 7/13/2017

### Furnace No. 339

### FACILITY PERMIT WEBER METALS INC.

## PERMIT TO OPERATE

Permit No. G40158 A/N 580279

#### Equipment Description:

Pre-Heat Furnace No. 3, Box Type, Aluminum And Titanium Billets, Thorpe Technologies, Inc., Custom, 34'-0" W. x 23'-0" L. x 18'-0" H., with Two Bloom Engineering Model 1480-030 Burners And Four Bloom Engineering Model 1480-035 Burners, Natural Gas-Fired, 8.54 MMBTU/hr Total.

#### Conditions:

 Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

- This equipment shall be properly maintained and kept in good operating condition at all times. [Rule 204]
- The NOx concentration, on a dry basis corrected to 3% oxygen, shall not exceed 40 parts per million by volume (ppmv).

[Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]

- A non-resettable totalizing gas meter shall be installed and maintained in the fuel supply line to the furnace. [Rule 1303(b)(2)-Offsets; Rule 1401; Rule 3004(a)(4)-Periodic Monitoring]
- The amount of natural gas fuel consumed by this furnace and those furnaces associated with permits to operate 580276, 580277 and 580278 shall not exceed 7,678,000 standard cubic feet in any one calendar month. [Rule 1303(b)(2)-Offsets; Rule 1401]
- Metal contaminated with rubber, plastics, paper, rags, oil, grease, or similar smoke-producing material shall not be charged to this furnace.

[Rule 401, Rule 1303(a)(1)-BACT]

Records shall be maintained to demonstrate compliance with conditions 3 and 5. The records shall be kept on file for at least the last five years and be made available to SCAQMD personnel upon request.

[Rule 1303(b)(2)-Offsets; Rule 1401; Rule 3004(a)(4)-Periodic Monitoring]

Test Nos. <u>17-339</u>, <u>17-341</u> and <u>17-343</u>

-80-

Date(s): 6/1/2017 and 7/13/2017

Section D Page 37 Facility I.D.#: 10966 Revision #: 7 Date: August 12, 2017

## FACILITY PERMIT WEBER METALS INC.

Emissions And Requirements:

- 8. This equipment is subject to the applicable requirements of the following rules and regulations:

  - CO: 2000 PPMV, Rule 407 PM: 0.1 GR/SCF, Rule 409 PM: Rule 404, See Appendix B for emission limits