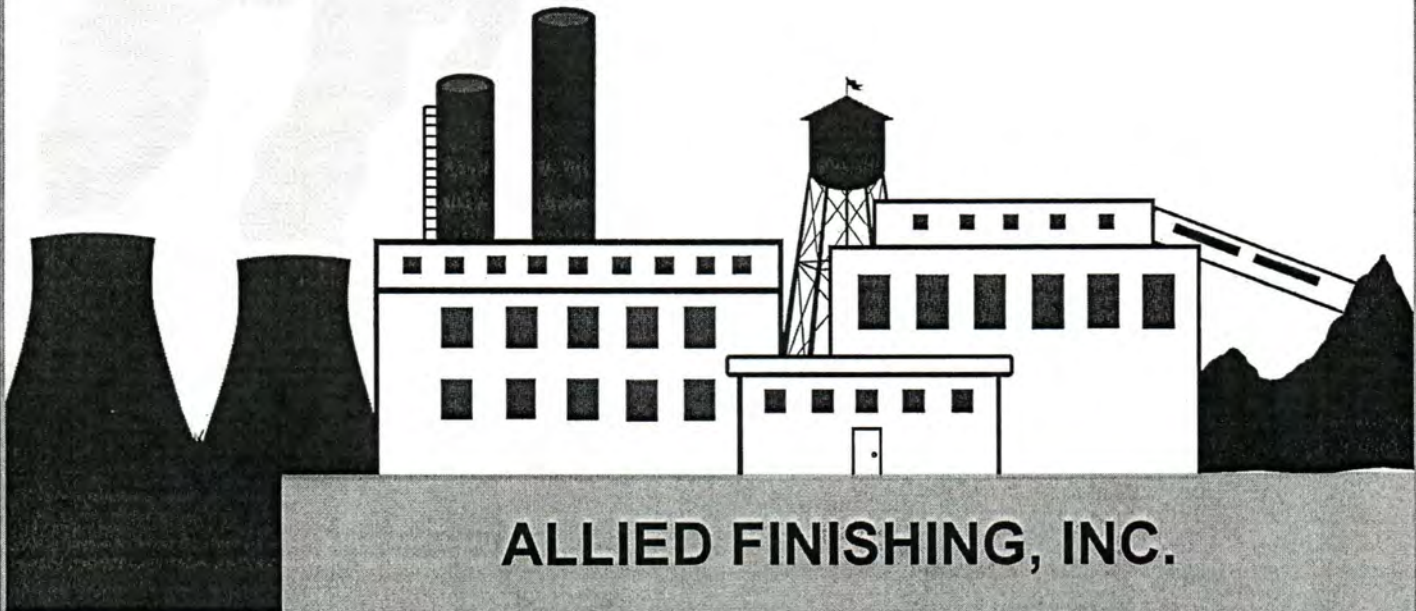




Grace Consulting, Inc.
Emissions Testing Services

CHROMIUM COMPLIANCE TEST REPORT

SRN B6196 - Permit No. 349-01G



ALLIED FINISHING, INC.

Allied Finishing, Inc.
4100 Broadmoor Ave. SE
Grand Rapids, MI 49501



FGBLUE1

Job # 22-1100

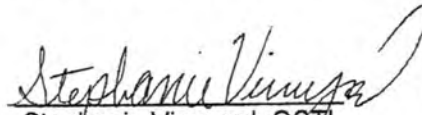
Test Date: 11-02-22
Report Date: 12-01-22



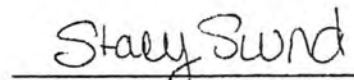


December 1, 2022

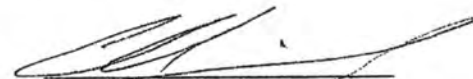
I, Stephanie Vineyard, hereby certify that the data obtained for Allied Finishing, Inc. on FGBLUE1 is in accordance with procedures set forth by the USEPA. This report accurately represents the data obtained from the testing procedures and analysis of this data.


Stephanie Vineyard, QSTI
Crew Chief
stephanie@gcitest.com

I, Stacy Sword, hereby certify that the report was prepared under my direction in conformance with the requirements of ASTM D7036. To the best of my knowledge the data and results are complete and accurate.


Stacy Sword, QSTI
Office Manager
stacysword@gcitest.com

I, Carl Vineyard, hereby certify that I have reviewed this report and to the best of my knowledge, the data presented herein is complete and accurate. GCI operated in conformance with the requirements of the ASTM D7036 during the test project.


Carl Vineyard, P.E., QSTI
Test Engineer
carlvineyard@gcitest.com

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INTRODUCTION

INTRODUCTION

This report presents the results of the Chromium emissions test performed for Allied Finishing, Inc. on FGBLUE1.

The purpose of the tests was to determine the emissions of the unit for compliance per 40 CFR Part 63, Subpart N. The results can be found in the Summary of Test Results section of this report.

The testing was performed by Grace Consulting, Inc., located at 684 Tower Rd., Plainfield, IN 46168. Present during the testing from Grace Consulting, Inc. were Stephanie Vineyard, Nick Vineyard, and Terrell Warlick. Also present during the testing were Nathan Dohm from Allied Finishing, Inc. and April Lazzaro and Trevor Drost from EGLE.

The tests were performed on November 2, 2022. The testing was completed in accordance with USEPA test methods as published in the Federal Register.

The sampling and analytical procedures can be found in the Methods and Discussion section of this report. The raw field data and the equations used to determine the final results are presented in the Appendix section.

SUMMARY OF TEST RESULTS

SUMMARY OF TEST RESULTS

The following presents the results of the emissions test performed for the Allied Finishing, Inc. on the FGBlue1

CHROMIUM EMISSIONS Method 306

<u>Run #</u>	<u>Test Date</u>	<u>lb/dscf</u>	<u>lb/hr</u>	<u>mg/DSCM</u>
1	11/2/2022	2.47E-11	2.00E-05	0.000396
2	11/2/2022	5.68E-11	4.70E-05	0.000910
3	11/2/2022	< 1.90E-11	< 1.59E-05	< 0.000304
Avg.		< 3.35E-11	< 2.77E-05	< 0.000537

*Limit: 0.006 mg/dscm

The complete results can be found on the computer printouts following.

GRACE CONSULTING, INC.
Chromium Analysis

Allied Finishing, Inc.
Grand Rapids, MI
FGBlue1
22-1100

Run Number			1	2	3
Date			11/2/2022	11/2/2022	11/2/2022
Location			FGBlue1	FGBlue1	FGBlue1
Comment			Method 306	Method 306	Method 306
Start Time			12:06	14:25	16:42
End Time			14:11	16:28	18:45
Barometric Pressure	In. Hg.	Pb	29.49	29.49	29.49
Static Pressure	In. H2O	Pf	-0.17	-0.17	-0.17
Volume of Condensate	mls.	Vlc	42	47	43
Volume Sampled	dcf	Vm	98.015	102.575	102.480
Meter Correction Factor		Y	0.967	0.967	0.967
Square Root of Delta P			0.921	0.943	0.956
Orifice Pressure	In. H2O		2.104	2.279	2.325
Meter Temperature	Degree F		75	86	84
Flue Temperature	Degree F		67	68	68
Percent CO2	%		0.00	0.00	0.00
Percent O2	%		20.90	20.90	20.90
Diameter of Nozzle	In.		0.223	0.223	0.223
Area of Flue	Sq. ft.		4.6	4.6	4.6
Sample Time	min.		120	120	120
Chromium Collected	grams		0.00000104	0.00000245	< 0.00000082
Absolute Flue Pressure	in. Hg	Ps	29.48	29.48	29.48
Corrected Sample Volume	dscf	Vms	92.68	95.08	95.35
Moisture of Flue Gas	%	Bws	2.09%	2.28%	2.08%
Calculated Saturated Moisture	%	Bwsat	2.26%	2.34%	2.34%
Moisture used for Calculations	%	Bwsu	2.09%	2.28%	2.08%
Molecular Weight	lb/lb-mole	Ms	28.61	28.59	28.61
Velocity of Flue Gas	fps	Vs	50.60	51.88	52.57
Volume of Flue Gas	ACFM	Vo	13,966	14,318	14,511
Volume of Flue Gas	DSCFM	Qsd	13,497	13,785	13,998
Sample Volume @ Standard Cond	dscm	Vms(metric)	2.62	2.69	2.70
Chromium Concentration	lb/dscf	Wd	2.47E-11	5.68E-11	< 1.90E-11
Chromium Concentration	lb/hr	Wh	2.00E-05	4.70E-05	< 1.59E-05
Chromium Concentration	gr/acf	Wa	1.67E-07	3.83E-07	< 1.28E-07
Chromium Concentration	gr/dscf	Ws	1.73E-07	3.98E-07	< 1.33E-07
Chromium Concentration	mg/DSCM		0.000396	0.000910	< 0.000304
Isokinetic Rate	%	%I	97.0	97.5	96.3

Averages:	Flue Temp.:	67.7	lb/dscf	<	3.35E-11
	ACFM:	14,265	lb/hr	<	2.77E-05
	DSCFM:	13,760	gr/dscf	<	2.35E-07
	Percent O2:	20.90%	mg/DSCM	<	0.000537

METHODS AND DISCUSSION

Test Methods used at Allied Finishing, Inc. on the FGBlue1

Method 3

CO₂ and O₂ concentrations were determined with 3 Method 3 test runs corresponding with the testing. Flue gas was collected at each test point into a tedlar bag. The gas was analyzed using an Apex Instruments Orsat with .1% scale.

Method 306

GCI performed 3 Method 306 test runs using Apex Instruments. The USEPA test procedures were followed as written with 24 test points sampled for 5 minutes each. Meter Box IN11 was used with a meter correction factor of 0.967.

Discussion

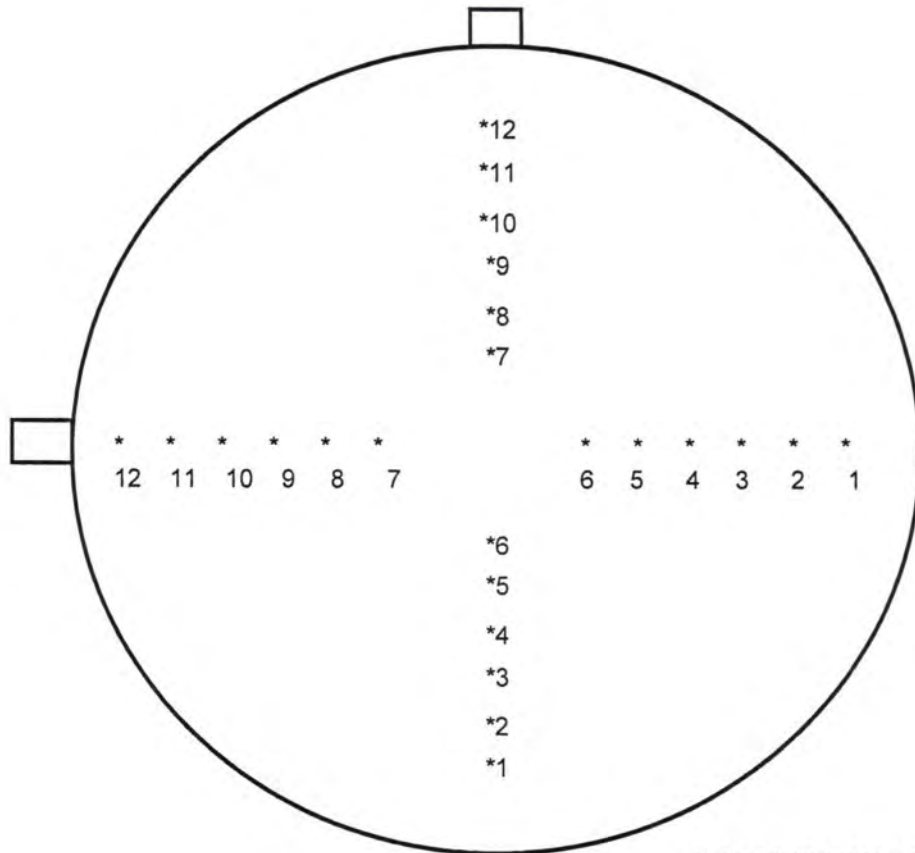
Environmental conditions did not adversely affect the test results.

Testing was completed by following GCI's Internal Site Specific Test Plan #22-1100 with no deviations.

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DRAWING NOT TO SCALE

POINTS DISTANCE FROM INSIDE WALL

1)	28.43 "
2)	27.10 "
3)	25.61 "
4)	23.90 "
5)	21.78 "
6)	18.70 "
7)	10.34 "
8)	7.26 "
9)	5.14 "
10)	3.43 "
11)	1.95 "
12)	0.61 "

STACK AREA = 4.6 sq ft
 STACK DIAMETER = 2.42 '

Allied Finishing, Inc.
 FGBlue1



Grace Consulting, Inc.
 Emissions Testing Services