verallia

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

May 7, 2012

Via Certified Mail: No. 7006 0100 0004 0901 7458
Return Receipt Requested

David Bubbenmoyer
Air Quality District Supervisor
Air Quality Program
Warren District Office
PA Department of Environmental Protection
321 N. Warren Street
North Warren, PA 16365

Re: Saint-Gobain Containers, Inc.
Port Allegany, PA
Response to PADEP Stack Test Results Letter
Global Consent Decree Civil Action Case No. 2:10-cv-00121-TSZ. W.D. Washington

Dear Mr. Bubbenmoyer:

You will note a new letterhead on this letter. Effective April 2010, all 12 Saint-Gobain glass packaging businesses around the globe (including Saint-Gobain Containers, Inc. ("SGCI") in the U.S.) became a single brand: Verallia.

SGCI acknowledges receipt of your letter dated April 4, 2012 and offers the following comments responding to the technical review conducted by the Source Testing Section. Except where specifically noted below, we believe that the sampling performance was valid, the results are representative of actual emissions, and those results demonstrate compliance with the applicable standards.

August 24 and 26, 2010 Sulfuric Acid Mist Testing

We consulted with Mr. Patrick Grady of O'Brien & Gere, the test firm which performed this testing. Mr. Grady confirms that the Sulfuric Acid Mist tests were valid and that the emissions were in compliance with the applicable limit. The testing was conducted in accordance with the pretest protocol; however, there was an apparent deviation from Conditional Test Method (CTM) 13A, as Pennsylvania Department of Environmental Protection's (Department) review of the protocol required that collection efficiency of the sample train be determined in accordance with Section 2.8 of the Department's Source Testing Manual. The Department required that the sample train include two IPA impingers to determine collection efficiency of the sample train. Those two mini-impingers were employed in the testing, although not required by the CTM 13A. The Department's Source Test Manual states, with regard to collection efficiency determination, that the "sample train" shall achieve 95% collection efficiency, and while the first impinger may have collected less than 90% of the total SAM, there is no evidence that the two

SAINT-GOBAIN CONTAINERS
One Glass Place, P.O. Box 69 Port Allegany, PA 16743-0069
Tel: (814) 642-2521 • Fax: (814) 642-3204 • www.sgcontainers.com • www.verallia.com

impingers combined failed to achieve the 95% criteria. In fact, the apparent low "collection efficiency" is, we believe, not indicative of any failure to collect all of the SAM emitted by the source.

It is evident that there was some carryover from the first impinger to the second impinger during the post-test leak check. The leak check is done at 25 inches of vacuum and with the mini-impingers used for the sample train it would be difficult not to have carryover when the pressure is released following completion of the test run. We believe that is why there is no collection efficiency requirement in the test method (CTM 13A). Given the low amount of sulfuric acid in the samples (less than 10 ppm), the sample volume collected (approximately 2 dscf) and the amount of adsorbing solution (approx. 50 ml IPA) we do not believe there was breakthrough of the sample train. A review of the laboratory report indicates that the matrix spike result for these samples was 96 percent, well within the QC limits of the method (80% to 120%). An analyst familiar with this method has indicated that the matrix spike would not have met the QC limits of the method had the IPA become saturated. Therefore, laboratory data from the spiked solution confirms that the IPA was not saturated. As noted above, whereas the CTM 13A sample train consists of only one mini-impinger of 25 ml IPA, the test firm employed two such impingers, thus further assuring total capture of the SAM. In conclusion we believe that this was a valid test since there was no SAM breakthrough based upon the amount of IPA in the impingers and sample volume collected. Enclosed is an amendment, Attachment A, to the test report text Section 3.10 clarifying that two IPA impingers were used.

We consulted with Mr. Michael Kelly of CK Environmental in preparing the responses to the following test report comments.

June 7 – 10, 2011

Method 5 Combined with Method 202

1. In accordance with Condition 4 of the March 16, 2011 Bureau of Air Quality protocol review letter (Attachment B), the filter temperature was maintained at 248 +/-25°F. Additionally, enclosed is a copy of a laboratory report (Attachment C) confirming that the natural gas Total Sulfur (% By Weight) is <0.0031%.
2. Lack of stratification and cyclonic flow suggest that additional sample collection for < 5 % of the total runtime should not invalidate the sampling and the results are representative of actual emissions. Although a mid-point was sampled for additional time, the sampling rate was adjusted accordingly to ensure that each individual point was sampled in accordance with isokinetic testing.
3. The reported results were based on a two run average, excluding the data from Run 3 due to the condition of the filter, and a retest was performed.

Method 25A

1. The cylinder value was 3.03, the actual response was 3.2 and this does exceed the allowable 5% calibration check. However, the actual stack concentration was bracketed well within the calibration standards and CK suggests that biasing the results high by 0.1 ppm is an acceptable deviation from the method.
2. Summary calibration checks are amended and attached with this response (Attachment D).
3. The data was corrected to ppmvd. Revised sample results summary table is attached with this response (Attachment E).

Method 201A

The permit does not require Method 201A, and thus the Method 5 results were sufficient to demonstrate compliance and the subsequent retest using Method 5 was sufficient for such purposes.

Method 6C, 7E, and 10

1. The volumetric flow rates were recalculated using only the first 24 points in the Method 5/202 train and not include the last points that were used to obtain the additional cubic feet of sample. Revised sample results summary table is attached with this response. (Attachment E)

August 23, 2011

Method 5 Combined with Method 202

1. Lack of stratification and cyclonic flow suggest that additional sample collection for < 5 % of the total runtime should not invalidate the sampling and the results are representative of actual emissions. CK is of the opinion that it is highly unlikely that the deviations from the method would change the compliance status as the results indicate 6.87 lbs/hr compared to the limit of 11.9 lbs/hr.
2. The 50 DSCF is a secondary requirement if the filters have very low weight gain which is not the case for this testing effort. The NSPS standard requires that the sample volume be at least 31.8 dscf. The filterable PM catch for this program averaged 43.9 mg.
3. The 30 ml/foot of probe is a PA DEP requirement and was overlooked by the field testing personnel. The same probe was used for all 3 tests which should help ensure that all of the particulate matter rinse was collected. The rinse volume on the third run was 140 ml and a rinse volume of 150 ml is required by the method. CK is of the opinion that it is highly unlikely that this minor deviation would change the compliance status of the results.
4. The cyclonic flow and stratification data was amended and is attached with this response (Attachment F).
5. The mass emissions were recalculated using the 24 points as referenced in Method 2. The extra time sampled has no impact on the volumetric flow data used for calculating gaseous lb/hr results. (Attachment G)
6. Process data for Run No. 3 was amended and is attached with this response (Attachment H).

August 24, 2011

Method 5 Combined with Method 202

The results of this test were not used to demonstrate compliance; a retest was performed on 10/21/11.

October 21, 2011

Method 5 Combined with Method 202

1. In accordance with Condition 4 of the March 16, 2011 Bureau of Air Quality protocol review letter (Attachment B), the filter temperature was maintained at 248 +/-25°F. Additionally, enclosed is a copy of a laboratory report (Attachment C) confirming that the natural gas Total Sulfur (% By Weight) is <0.0031%.
2. The sampling points for the PM10 sampling train were inadvertently used for this test program. Although the PM10 points are fewer than the 5/202 points, the compliance status should not be impacted as the results indicate that the unit is operating at < 85% of permitted value.
3. Lack of stratification and cyclonic flow suggest that additional sample collection for < 15 % of the total runtime should not invalidate the sampling and the results are representative of actual emissions.
4. Cyclonic flows have been performed on this unit by CK. A copy of the field data sheet is enclosed (Attachment I).

For the reasons stated above, except where specifically noted, the sampling performance was valid, the results are representative of actual emissions and demonstrate compliance.

SGCI would like to express its disappointment in the Agency's delay in providing comments on the testing program. For example, we note the internal memo commenting on the August 24 and 26, 2010 testing was dated March 9, 2011 yet the letter to us was 13 months after that memo. This did not afford us the opportunity to address your concerns in a timelier manner.

Please note for your records that your letter was addressed to Mr. Rene Beltran; I became the Plant Manager in March. The Responsible Official notification and Title V Administrative Amendment were processed by the Meadville office in March. If you have any questions or require additional information, please contact me at 814-642-3210.

Sincerely,
Saint-Gobain Containers, Inc.

Martin Reynolds
Plant Manager

Enclosure

Attachment A

3.10 SULFURIC ACID MIST EMISSIONS

Emissions of SAM (including sulfur trioxide) were determined in accordance with Conditional Test Method (CTM) 13A. The sample train consisted of a heated quartz glass probe, heated quartz filter and five midget impingers in series. The first two impingers each contained 25 milliliters (ml) of 80 percent isopropanol (IPA). The third was empty and the fourth impinger contained 25 ml of 3 percent hydrogen peroxide. The fifth impinger contained indicating silica gel.

Following each test run the probe and front-half of the filter holder were rinsed with 100 percent IPA and placed in a sample container. The contents of the first impinger were placed in sample container #1. The first impinger and back-half of the filter holder and connecting line were rinsed with minimal amounts of 80 percent IPA. The contents of the second impinger were placed in sample container #2. The sulfuric acid mist sample fractions were measured by the barium-thorin titration method. Both sample containers #1 and #2 were analyzed separately.

Attachment B

Rachel Carson State Office Building
P.O. Box 8468
Harrisburg, PA 17105-8468
March 16, 2011

717-787-1729

Bureau of Air Quality

Ms. Jayne Browning
Saint-Gobain Containers, Inc.
Saint Gobain Place
Port Allegany, PA 16743-0069

Dear Ms. Browning:

The test protocol to determine the sulfur dioxide (EPA Method 6C), nitrogen oxides (EPA Method 7E), carbon monoxide (EPA Method 10), volatile organic compounds (EPA Method 25A), filterable/condensable particulate matter (EPA Method 5/202), particulate matter 2.5μ and 10μ (EPA Method 201A), and visible (EPA Method 9) emissions of glass furnace No. 1 (Source ID 101) at Saint Gobain Container, Inc.'s facility in Port Allegany Borough, McKean County is unacceptable to the Department unless the following conditions are met:

1. Conduct a pretest cyclonic flow check and provide data in the final report.

2. Conduct a pretest gas stratification check and provide data in the final report.

3. The minimum probe rinse for each FPM (EPA Method 5) test run must be at least 30 mL per foot of probe or 200 mL, whichever is greater, to ensure effective recovery.

4. A minimum sample volume of 50 dscf shall be collected for each run of EPA Method 5. The filter temperature shall be maintained at 248°F +/- 25°F.

5. Filterable particulate results shall be presented as gm/kg of glass produced and calculated using equation § 60.296 (d)(1) of 40 CFR 60, Subpart CC. Total particulate results shall be presented as gr/dscf, lb/hr, lb/ton glass produced and ton per year for all four components of the total: filterable, organic condensable, inorganic condensable, and total particulate matter.

6. If at a later time the results from EPA Method 201A are to be used to determine total particulate, the back-half shall be an EPA Method 202 train instead of an EPA Method 5 train. EPA Method 201A on its own provides results for filterable particulate matter 2.5μ and 10μ.

7. EPA Method 6C, 7E, 10, and 25A test runs and data collection shall be for three runs of at least 60 minutes each.

Attachment C

1 of 1

2007 11:47AM FR Vineyard Oil & Gas RIE DIV. TO 7259667 No. 6008 P. 2/03

Microbac Laboratories, Inc.
ERIE DIVISION
1962 WAGER ROAD
ERIE, PA 16509
(814) 825-8533 FAX (814)825-9254
MARK MATROZZA, LAB DIRECTOR
http://www.microbac.com E-Mail: eric@microbac.com

STATE CERT ID.
25-067, 10121
C-PA-05

CHEMISTRY · MICROBIOLOGY · FOOD SAFETY · CONSUMER PRODUCTS
WATER · AIR · WASTES · FOOD · PHARMACEUTICALS · NUTRACEUTICALS

CERTIFICATE OF ANALYSIS

VINEYARD OIL & GAS
10299 WEST MAIN ROAD
NORTH EAST, PA 16428

PORT ALLEGANY (LOCAL Production)

Date Reported
Date Received 3/27/2007
Order Number 0703-02153
Invoice No.
Cust # 082221

Permit No.
Cust P.O.

SUBJECT: GAS SAMPLE FOR ANALYSIS RCVD 3-27-07

TEST	METHOD	RESULT	ANALYSIS DATE	TIME	TECH	ACCRED.
001 PORT ALLEGANY P/C SALES METER						
Date Sampled: 3/20/2007			Time Sampled: 7:30 am			
Sulfur, Total (Nat.Gas-LL)	ASTM D 1072-90		3/27/2007	15:08	MWR	
TOTAL SULFUR		<1 GR/100SCF	3/27/2007	15:08	MWR	
TOTAL SULFUR (% BY WEIGHT)		<0.0031 %	3/27/2007	15:08	MWR	

All samples received in proper condition and results conform to ISO 17025 standards unless otherwise noted

Accred.
- This symbol at the end of the test line means the test analysis met the requirements of NELAC (PA ID 25-00067)
- This symbol at the end of the test line means the test analysis met the requirements of AIHA (ID 100386)
- This symbol at the end of the test line means the test analysis met the requirements of NY ELAP (NY ID 10121)

ABBREVIATIONS:

TNTC	= Too Numerous To Count	MG/KG	= Milligram per Kilogram (PPM)
UG/L	= Microgram per Liter (PPB)	CFU	= Colony Forming Unit
UG/KG	= Microgram per Kilogram (PPB)	ND	= Not detected at or below the reporting limit
MG/L	= Milligram per Liter (PPM)	TIC	= Tentatively Identified Compound
1000 UG	= 1 MG	"<"	= less than (also see "ND")
Positive	= Bacteria or target analyte detected	Negative	= Bacteria or target analyte not detected

For any feedback concerning our services, please contact the Managing Director of Trevor Boyce, President at tboyce@microbac.com or Robert Morgan, Chief Operating Officer, at rmorgan@microbac.com

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USDA-EPA-NIOSH Testing Food Sanitation Consulting Chemical and Microbiological Analyses and Research
Website to view our current NELAC accreditation for

Received Time Mar. 27. 2007 4:15PM No. 5974

MEMBER ACIL

2 of 2

SEP-30-2011 10:21 FROM MICROBAC LABS/ERIE DIV. TO 18147259567 P.02/02

Microbac

Microbac Laboratories, Inc.
Erie Division
1962 Wager Road • Erie, PA 16509 • Phone: 814-825-8539 • Fax: 814-825-9254
Cheri Estes, Managing Director • E-mail: erie@microbac.com • http://www.microbac.com

PRELIMINARY CERTIFICATE OF ANALYSIS

Work Order Number:
1111772

Vineyard Oil & Gas
10299 West Main Road
North East, PA 16428

Date Reported	09/29/2011
Date Received	09/27/2011
Order Number	1111772
Account Number	000000002221

Purchase Order:
Subject: Saint Gobain Location - Gas sample

SMP	TEST	METHOD	RESULT	UNITS	ANALYSIS DATE	TIME	TECH	NOTES

Cheri A. Estes
Cheri A. Estes
Managing Director

For any feedback concerning our services, please contact Cheri Estes, Managing Director at Cheri.Estes@microbac.com. You may also contact Sean Hyde, Chief Operating Officer at sean.hyde@microbac.com or James Nokes, President at James.nokes@microbac.com.

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HELAP accredited by PA, DH. Visit our website to view our current HELAP accreditations for various drinking water, wastewater and solid & chemical materials, air & emission analyses
AIHA accredited for Environmental Lead. Visit our website to view our current AIHA LAP,LLC accreditation.

MEMBER ACIL

Purchase Order:

Subject: Saint Gobain Location - Gas sample

SMP	TEST	METHOD	RESULT	UNITS	ANALYSIS DATE	TIME	TECH	NOTES
01	Natural Gas Sample - Saint Gobain Location							
	Sample Date: 09/26/2011		Sample Time: 14:30					
	BTU, Dry (High Heat Value), Fuel	ASTM D1945-91/D3588-98	1111	BTU/ft³	09/27/11	12:28	WAH	
	BTU, Net, Dry (Low Heat Value), Fuel	ASTM D1945-91/D3588-98	1004	BTU/ft³	09/27/11	12:28	WAH	
	BTU, Net, Saturated (Low Heat Value), Fuel	ASTM D1945-91/D3588-98	986.7	BTU/ft³	09/27/11	12:28	WAH	
	BTU, Saturated (High Heat Value), Fuel	ASTM D1945-91/D3588-98	1092	BTU/ft³	09/27/11	12:28	WAH	
	Density, g/ml, Fuel	ASTM D1945-91/D3588-98	0.0098	g/ml	09/27/11	12:28	WAH	
	Density, lbs/ft³, Fuel	ASTM D1945-91/D3588-98	0.0479	lbs/ft³	09/27/11	12:28	WAH	
	LHV Compounds, Fuel	ASTM D1945-91/D3588-98						
	Iso-Butane		0.23	% (mole)	09/27/11	12:28	WAH	
	Methane		88.6	% (mole)	09/27/11	12:28	WAH	
	Ethane		7.94	% (mole)	09/27/11	12:28	WAH	
	Propane		2.05	% (mole)	09/27/11	12:28	WAH	
	n-Butane		0.39	% (mole)	09/27/11	12:28	WAH	
	Iso-Pentane		0.08	% (mole)	09/27/11	12:28	WAH	
	N-Pentane		0.04	% (mole)	09/27/11	12:28	WAH	
	Hexanes		<0.01	% (mole)	09/27/11	12:28	WAH	
	Carbon Dioxide		<0.02	% (mole)	09/27/11	12:28	WAH	
	Nitrogen		0.70	% (mole)	09/27/11	12:28	WAH	
	Nitrogen, LHV, WT. %, Fuel	ASTM D1945-91/D3588-98	1.08	Wt. %	09/27/11	12:28	WAH	
	Specific Gravity, LHV, Fuel	ASTM D1945-91/D3588-98	0.526		09/27/11	12:28	WAH	

All samples received in proper condition and results conform to ISO 17025 unless otherwise noted

Notes and Definitions

MG/KG	= Milligram per Kilogram (PPM)	Negative	= Details of target analyte not detected
UG/L	= Micrograms per Liter (PPB)	CFU	= Colony Forming Unit
UG/KG	= Micrograms per Kilogram (PPB)	ND	= Not detected at or below the reporting limit
MG/L	= Milligrams per Liter (PPM)	TIC	= Tentatively Identified Compound

Attachment D

Environmental

METHOD 25A DATA SHEET

AMENDED on 4/21/12

PLANT: St. Gobain
TEST LOCATION: Furnace #1
LOAD:

DATE: 6/8/11
OPERATOR: McKelley
RESPONSE TIME:

CALIBRATION ERROR TEST					
TEST AREA	CALIBRATION GAS LEVEL (% SPAN)	CYLINDER CONCENTRATION	ACTUAL RESPONSE	PREDICTED RESPONSE	CALIBRATION ERROR
THC INLET	ZERO	0.0			
	LOW (25-35%)				
	MID (45-55%)				
	HIGH (80-90%)				
MEASUREMENT SPAN =	SLOPE =				
THC OUTLET	ZERO	0.0	.1		
	LOW (25-35%)	3.03	3.2	3.0	
	MID (45-55%)	4.96	4.8	4.9	
	HIGH (80-90%)	8.9	8.9		
MEASUREMENT SPAN =	SLOPE =	.988			

CALIBRATION ERROR = LESS THAN 5% OF THE RESPECTIVE CYLINDER CONCENTRATION

FORMULAS:

SLOPE = (HIGH LEVEL CAL GAS ACTUAL RESPONSE - ZERO GAS ACTUAL RESPONSE) / HIGH LEVEL CAL GAS CYLINDER CONCENTRATION

PREDICTED RESPONSE = SLOPE * CYLINDER CONCENTRATION

CALIBRATION ERROR = 100*(ACTUAL RESPONSE - PREDICTED RESPONSE) / CYLINDER CONCENTRATION

CALIBRATION DRIFT TEST									
TEST AREA	CE TEST ACTUAL RESPONSE	RUN 1		RUN 2		RUN 3		SPARE	
		RESPONSE	DRIFT	RESPONSE	DRIFT	RESPONSE	DRIFT	RESPONSE	DRIFT
THC INLET									
THC OUTLET		.1	0	.4	3	.7	3		
		9.8	0	5.0	2	4.8	2		

CALIBRATION DRIFT = LESS THAN 3% OF THE MEASUREMENT SPAN

CALIBRATION DRIFT = 100*(CAL ERROR TEST ACTUAL RESPONSE - CAL DRIFT TEST RESPONSE) / MEASUREMENT SPAN

RUN AVERAGES	RUN 1	RUN 2	RUN 3	SPARE
RUN TIME:	13:47-16:08	16:55-18:10		
INLET:				
OUTLET:	6.43	2.94		
DE %:				

Quality Control Check: Completeness_____ Legibility_____ Accuracy_____ Specifications_____ Reasonableness_____

environmental

METHOD 25A DATA SHEET

AMENDED on 4/21/12

PLANT: ST. GOBAIN
TEST LOCATION: FURNACE #1
LOAD:

DATE: 6/8/11
OPERATOR: M. KOLVOY
RESPONSE TIME:

CALIBRATION ERROR TEST					
TEST AREA	CALIBRATION GAS LEVEL (% SPAN)	CYLINDER CONCENTRATION	ACTUAL RESPONSE	PREDICTED RESPONSE	CALIBRATION ERROR
THC INLET	ZERO	0.0			
	LOW (25-35%)				
	MID (45-55%)				
	HIGH (80-90%)				
MEASUREMENT SPAN =	SLOPE =				
THC OUTLET	ZERO	0.0 (8:05)	0		
	LOW (25-35%)	3.03 (8:13)	3.0	3.03	1.0
	MID (45-55%)	4.96 (8:17)	4.9	4.96	1.2
	HIGH (80-90%)	8.9 (8:09)	8.9		
MEASUREMENT SPAN =	SLOPE =	1.0			

CALIBRATION ERROR = LESS THAN 5% OF THE RESPECTIVE CYLINDER CONCENTRATION

FORMULAS:

SLOPE =	(HIGH LEVEL CAL GAS ACTUAL RESPONSE - ZERO GAS ACTUAL RESPONSE) / HIGH LEVEL CAL GAS CYLINDER CONCENTRATION
PREDICTED RESPONSE =	SLOPE * CYLINDER CONCENTRATION
CALIBRATION ERROR =	100*(ACTUAL RESPONSE - PREDICTED RESPONSE) / CYLINDER CONCENTRATION

CALIBRATION DRIFT TEST									
TEST AREA	CE TEST ACTUAL RESPONSE	RUN 1		RUN 2		RUN 3		SPARE	
		RESPONSE	DRIFT	RESPONSE	DRIFT	RESPONSE	DRIFT	RESPONSE	DRIFT
THC INLET									
THC OUTLET		0	0	0 (11:32)	0				
		4.9	0	4.9 (11:25)	0				

CALIBRATION DRIFT = LESS THAN 3% OF THE MEASUREMENT SPAN

CALIBRATION DRIFT =	100*(CAL ERROR TEST ACTUAL RESPONSE - CAL DRIFT TEST RESPONSE) / MEASUREMENT SPAN

RUN AVERAGES	RUN 1	RUN 2	RUN 3	SPARE
RUN TIME:				
INLET:				
OUTLET:	6.57			
DE %:				

Quality Control Check: Completeness_____ Legibility_____ Accuracy_____ Specifications_____ Reasonableness_____

Attachment E

Summary of Performance Testing Emissions
Saint Gobain - Port Allegany
Furnace #1

6/8-9/2011

Test Run No.		Run 1	Run 2	Run 3	Average	Facility Permit Limit
Date		06/08/11	06/08/11	06/09/11		
Time	Start	13:40	16:55	9:08		
	Stop	14:55	18:10	10:32		
Sample Conditions						
Volume	(dscf)[a]	52.808	50.958	51.398	51.721	
Volume	(dscm)[b]	1.496	1.443	1.456	1.465	
Isokinetics	(%)	99.3	96.7	105.2	100.4	
Glass Pull	Tons/hr	7.8	7.8	7.8	7.8	
Stack Conditions						
Flow Rate	(dscfm)[a]	24,581	25,051	21,665	23766	
Temperature	(°F)	420.3	395.8	405.7	407.3	
Moisture	(%)	11.7	12.1	14.9	12.9	
Oxygen	(%)	16.2	16.0	16.2	16.1	
Carbon Dioxide	(%)	4.0	3.9	3.9	3.9	
Oxides of Nitrogen	(PPM)	133.0	149.0	142.2	141.4	
Oxides of Nitrogen	lb/hr	23.440	26.757	22.087	24.1	
Oxides of Nitrogen	lb/ton of glass pull	3.005	3.426	2.828	3.1	7.8
Oxides of Nitrogen	tons/yr	102.67	117.19	96.74	105.5	
Carbon Monoxide	(PPM)	371.6	433.7	280.3	361.8	
Carbon Monoxide	lb/hr	39.843	47.391	26.490	37.9	
Carbon Monoxide	lb/ton of glass pull	5.108	6.068	3.392	4.9	
Carbon Monoxide	tons/yr	174.51	207.57	116.02	166.0	
Sulfur Dioxide	(PPM)	63.9	57.2	47.4	56.2	500
Sulfur Dioxide	lb/hr	15.672	14.299	10.245	13.4	
Sulfur Dioxide	lb/ton of glass pull	2.009	1.831	1.312	1.7	
Sulfur Dioxide	tons/yr	68.64	62.63	44.87	58.7	
Volatile Organic Compounds	(PPM)	6.43	2.94	6.57	5.3	
Volatile Organic Compounds	(PPMvd)	7.28	3.34	7.72	6.1	
Volatile Organic Compounds	lb/hr	1.084	0.505	0.976	0.9	
Volatile Organic Compounds	lb/ton of glass pull	0.139	0.065	0.125	0.1	
Volatile Organic Compounds	tons/yr	4.75	2.21	4.27	3.7	
Opacity	(%)	5.2	5.3	5.1	5.2	< 20

Recalculated emission rates using 24 Traverse Points

a) dry standard cubic feet
b) dry standard cubic meters

3979 PM - CEM - Furnace 1Summary Table

EPA-R5-2017-001098_0000714

Attachment F

FLOW AND MOISTURE DATA SHEET

Run No. CYCLONIC CHECK

Client: S. GOBAIN
Plant:
Facility: #3
City, State: PORT ALV, PA
Test Date:
Test Loc: JOB D, RG
Testers: 8/23/11

Duct Dia:
Test Duration:
Min. Per Pt:
Amb. Temp:
Bar. Press:
Probe ID:
Dry Gas Meter Y:

Pitot Coefficient:
Orifice Delta H@:
Test Time: Start
Stop
Train Lk Ck: Start "Hg
Final "Hg
Pitot Lk Ck: (>3" WC) Start OK
Final OK

Delta H = 2

Stack Static Pressure:									
Port	Point	Time min.	~~Velocity~~ ~~Delta P~~	T Stack F	Gas Volume ft^3	Dry Gas Meter In	Dry Gas Meter Out	Last Imp. F	Pump Vac "Hg
	1		15						
	2		10						
	3		10						
	4		5						
	5		10						
	6		5						
	~~7~~								
	~~8~~								
	1		10						
	2		10						
	3		0						
	4		5						
	5		5						
	6		10						
	~~7~~								
	~~8~~								
		AVERAGE =	2.20						

Impinger Catch:

Imp. No.	1	2	3	4
Final vol/wt.				
Init. vol/wt.				
Catch				

O2 =
CO2 =

Field Calculations
As = _____ ft2
Tsld = 528 R Psld = 29.92 in. Hg
Ts = 460 + Tsik = _____ R
Ps = Pbar + (Pg/13.6) = _____ in. Hg
Vs = (85.49) x Cp x sqrt(Delta P) x sqrt[Ts/(Ps x MW)]
= _____ ft/sec
Qa = 60 x Vs x As = _____ ACFM
Qsld = Qa x (1-Bws) x (Tsld/Ts) x (Ps/Psld)
= _____ DSCFM

Quality Control Check:
Completeness_____ Legibility_____ Accuracy_____ Specifications_____ Reasonableness_____

Attachment G

Summary of Performance Testing Emissions
Saint Gobain - Port Allegany
Furnace #3

8/23/11

Test Run No.		Run 1	Run 2	Run 3.	Average	Facility Permit Limit
Date		8/23/201	8/23/201	8/23/201		
Time	Start	10:40	13:25	17:40		
	Stop	12:30	17:06	19:08		
Sample Conditions						
Volume	(dscf)[a]	50.093	46.122	46.769	47.658	
Volume	(dscm)[b]	1.419	1.306	1.324	1.350	
Isokinetics	(%)	101.9	94.4	96.7	97.7	
Glass Pull	Tons/hr	11.2	11.2	11.2	11.2	
Stack Conditions						
Flow Rate	(dscfm)[c]	37,556	37,850	38,111	37839	
Temperature	(°F)	468.2	478.3	485.1	477.2	
Moisture.	(%)	4.9	7.1	7.1	6.4	
Oxygen	(%)	16.3	16.3	16.4	16.4	
Carbon Dioxide	(%)	3.6	3.6	3.6	3.6	
Oxides of Nitrogen	(PPM)	125.7	130.6	126.9	127.7	
Oxides of Nitrogen	lb/hr	33.849	35.446	34.655	34.6	
Oxides of Nitrogen	lb/ton of glass pull	3.022	3.165	3.094	3.1	6.0
Oxides of Nitrogen	tons/yr	148.26	155.25	151.79	151.8	

Recalculated emission rates using 12 traverse points

a) dry standard cubic feet
b) dry standard cubic meters
c) dry standard cubic feet per minute

EPA-R5-2017-001098_0000718

Attachment H

Process Operating Data Saint Gobain Containers -Port Allegany,Pa Furnace 3

		26705 Glass Feed Rate	268.0 Glass Pull Rate	Gas Usaage	#3 Front Crown Temp
Date	Time	Ton/Hr	Ton/Hr	MCF/Hr	Deg F
8-23-11	0800	26705 / 11.2	2.1108 / 11.2	46.25	2668
	0815	11.2	11.2	45.25	2668
	0830	11.2	11.2	46.25	2665
	0845	11.2	11.2	45.25	2666
	0900	11.2	11.2	46.25	2669
	0915	11.2	11.2	46.25	2666
	0930	11.2	11.2	45.25	2660
	0945	11.2	11.2	46.25	2670
	1000	11.2	11.2	45.25	2661
	1015	11.2	11.2	45.25	2664
	1030	11.2	11.2	46.25	2658
	1045	11.2	11.2	45.25	2655
	11:00	11.2	11.2	46.25	2658
	11:15	11.2	11.2	45.25	2656
	11:30	11.2	11.2	45.25	2660
	11:45	11.2	11.2	46.25	2657
NOON	12:00	11.2	11.2	46.25	2660
	12:15 Pm	11.2	11.2	45.50	2658
	12:30 Pm	11.2	11.2	46.25	2659
	12:45 Pm	11.2	11.2	45.50	2656
	1:00 Pm	11.2	11.2	46.25	2658
	1:15 Pm	11.2	11.2	46.25	2659
	1:30 Pm	11.2	11.2	45.50	2660
	1:45 Pm	11.2	11.2	46.25	2657
	2:00 Pm	11.2	11.2	45.50	2658
	2:15 Pm	11.2	11.2	45.50	2664
	2:30 Pm	11.2	11.2	46.25	2659
	2:45 Pm	11.2	11.2	45.50	2656
	3:00 Pm	11.2	11.2	46.25	2662
	3:15 Pm	11.2	11.2	45.50	2659
	3:30 Pm	11.2	11.2	45.50	2660
	3:45 Pm	11.2	11.2	46.25	2657
	4:00 Pm	11.2	11.2	45.50	2663
	4:15 Pm	11.2	11.2	45.50	2667
	4:30 Pm	11.2	11.2	46.25	2661
	4:45 Pm	11.2	11.2	45.50	2656
	5:00 Pm	11.2	11.2	45.50	2664
	5:15 Pm	11.2	11.2	46.25	2663
	5:30 Pm	11.2	11.2	45.50	2661
	5:45 Pm	11.2	11.2	46.25	2657
	6:00 Pm	11.2	11.2	45.50	2660

Time	Tons/HR	Tons/HR	MGF/HR	Deg F
6:15 Pm	11.2	11.2	45.50	2659
6:30 Pm	11.2	11.2	46.25	2658
6:45 Pm	11.2	11.2	45.50	2654
7:00 Pm	11.2	11.2	46.25	2662
7:15 Pm	11.2	11.2	45.50	2657

Attachment I

CYCLONIC + DIAG FLOW

CK Environmental, Inc.

Phone:(781 828-5200) Fax:(781 828-5380)

EPA Method 5 / 202
Field Data Sheet

Run No _____

Page 1 of 1

Client	Saint Gobain	Pollutant		Nozzle No. & Dia.		Pitot Coefficient	0.84
Plant		Duct Dia.		Probe ID.		Orifice Delta H @	
Facility	CURN #1	Test Duration		Probe Heat Set		Test Time	Start
City, State	Port Allegany	Min. Per Pt.		Filter Temp. Set			Stop
Test Date	6/7/11	Amb Temp		Assumed % H_2O		Train Leak Check	Start CFM@ in. Hg.
Location	Furnace #1	Bar. Press.		Nomograph K Factor			Final CFM@ in. Hg.
Testers		Filter No.		Dry Gas Meter Y		Pitot Leak Check (>3" WC)	Start OK
Meter Box ID							Final OK
Fuel							

Stack Static Pressure:

Port	Point	Time min.	Velocity Delta P	~~Delta H~~ Cyclonic	Gas Vol. ft³	Temp Prb F	T stack F	Dry Gas Meter Inlet	Dry Gas Meter Outlet	Filter Box F	Last Imp F	Aux F	Pump Vac Hg"
4	1		.53	0			409						
	2		.61	5			412						
	3		.66	10			414						
	4		.64	0			417						
	5		~~.56~~ .51	0			418						
	6		.48	5			420						
	7		.24	10			421						
	8		.19	5			420						
	9		.18	0			419						
	10		.16	0			420						
	11		.12	5			416						
	12		.10	10			412						
3	1		.28	0			421						
	2		.31	5			421						
	3		.34	5			420						
	4		.43	10			422						
	5		.52	5			423						
	6		.59	0			422						
	7		.42	10			423						
	8		.27	10			423						
	9		.26	5			424						
	10		.23	0			425						
	11		.19	0			416						
	12		.16	0			409						
Avg sqrt dP/Avg/ or Total:			.57										

Impinger Catch:

Imp. No.	1	2	3	4	5	
Final vol/wt.						
Init. vol/wt.			100			TOTAL
Catch			DI/F H2O	Si Gel		

Orsat Analysis
EPA Method 3

O_2	
CO_2	

Field Calculations
As = _____ ft²
Tsld = 528 R Psld = 29.92 in. Hg
Ts = 460 + Tslk = _____ R
Ps = Pbar + (Pg/13.6) = _____ in. Hg
Vs = (85.49) x Cp x sqrt(Delta P) x sqrt[Ts/(Ps x MW)]
= _____ ft/sec
Qa = 60 x Vs x As = _____ ACFM
Qsld = Qa x (1-Bws) x (Tsld/Ts) x (Ps/Psld)
= _____ DSCFM

Notes:

Quality Control Check:
Completeness_____ Legibility_____ Accuracy_____ Specifications_____ Reasonableness_____

N2 Purge @ 20lpm Start Time _____
End Time _____

EPA-R5-2017-001098_0000723

Cc: All send certified mail – return receipt requested

Via Certified Mail: No. 7006 0100 0004 0902 1325

Director
Air Enforcement Division (2242A)
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Agency
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Washington, D.C. 20460

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