KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES
4014 NW 13th STREET
GAINESVILLE, FL 32609-1923
352/377-5822 ▪ FAX/377-7158

676-10-01
October 27, 2010

Via UPS Ground

FDEP Tallahassee Office
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: ***RTO Destruction Efficiency Test***
Exteria Building Products, LLC
Miami, Dade County, Florida
Permit No. 0250407-013-AV

To Whom It May Concern:

Please find enclosed a copy of our test report representing testing conducted at the subject facility on September 17, 2010. The signed Responsible Official Certification will be forwarded under separate cover. If you have any questions or concerns, please do not hesitate to call our office.

Respectfully submitted,

KOOGLER AND ASSOCIATES, INC.

Kim Hasko
Office Manager

/kh

Enclosures: Report

RTO DESTRUCTION EFFICIENCY TEST

COATING LINE NO. 2

Exteria Building Products, LLC.
Miami-Dade County, Florida

Permit No. 0250407-013-AV

Test Date: September 17, 2010
Report Date: October 27, 2010

Responsible Official Certification:

I certify that, based upon information and belief formed after reasonable inquiry, the statements and information in the attached documents are true, accurate and complete.

Signature

10/28/2010
Date

Stefan Schwarz / Vice-President of Engineering
Name / Title

RTO DESTRUCTION EFFICIENCY TEST
COATING LINE NO. 2

Exteria Building Products, LLC
Miami-Dade County, Florida

Permit No.: 0250407-013-AV

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RTO DESTRUCTION EFFICIENCY TEST
COATING LINE NO. 2

RECEIVED
OCT 29 2010
BUREAU OF
AIR REGULATION

Exteria Building Products, LLC
Miami-Dade County, Florida

Permit No. 0250407-013-AV

Test Date: September 17, 2010
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Koogler and Associates, Inc.
4014 N.W. 13th Street
Gainesville, Florida 32609-1923
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ENVIRONMENTAL SERVICES

RTO DESTRUCTION EFFICIENCY TEST

COATING LINE NO. 2

Exteria Building Products, LLC.
Miami-Dade County, Florida

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Stefan Schwarz Vice-President of Engineering	
Signature	Date

Stefan Schwarz / Vice-President of Engineering
Name / Title

676-10-01

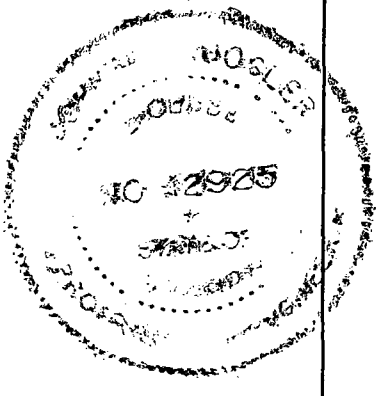
KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

To the best of my knowledge, all applicable field and analytical procedures comply with the Florida Department of Environmental Protection requirements and all test data and plant operating data are true and correct.

John B. Koogler, Ph.D., P.E.

State of Florida
License No. 12925

October 27, 2010
Date



KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

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1.0 INTRODUCTION

Koogler and Associates, Inc. of Gainesville, Florida conducted VOC destruction efficiency tests on the RTO on Coating Line No. 2 (EU-004) at Exteria Building Products, LLC (Exteria) in Miami, Miami-Dade County, Florida. The testing was conducted on September 17, 2010.

Exteria is a manufacturing facility producing polypropylene (a thermoplastic Polyolefin – TPO) siding and shingles used for architectural and construction applications. The products are manufactured, coated and packaged at the facility for shipping off site. The facility is permitted by FDEP Permit No. 0250407-013-AV. The facility is also subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart PPPP, *Surface Coating of Plastic Parts and Products*, for compliance and standards of performance including HAP emission limits, Continuous Parameter Monitoring System (CPMS) requirements and emissions capture and control demonstrations.

The Coating Line No. 2 consists of three continuous coating spray booths, two touch-up booths, and an electric curing oven. Solvent-based coatings are utilized in the process. The air stream extracted from Spray Booths of Line No. 1 and No. 2 pass through a common regenerative thermal oxidizer (RTO). The RTO uses natural gas as a fuel or supplemental fuel to create and maintain an operating

temperature of 1500-1700°F. The RTO design destruction efficiency for VOCs is 97 percent.

1.1 Test Summary

The VOC destruction efficiency tests of the RTO were conducted on September 17, 2010 with only Line No. 2 operating; a standard Exteria production scenario. The testing was designed to demonstrate high destruction efficiencies that meet permit conditions with low RTO operating temperatures due to lower VOC input. The destruction efficiency was determined by simultaneously measuring the mass of VOCs entering the RTO and the mass VOC emission rate from the RTO using EPA Method 25A measurements. Under the typical worst case operating scenario on September 17, 2010, the VOC destruction efficiency of the RTO averaged 98.39 percent at an average RTO chamber temperature of 1544°F.

1.2 Regulatory Requirements

Requirements for Performance Tests

40 CFR 63.4564 states:

(a) You must conduct each performance test required by § 63.4560 according to the requirements in § 63.7(e) (1) and under the conditions in this section, unless you obtain a waiver of the performance test according to the provisions in § 63.7(h).

(1) Representative coating operation operating conditions. You must conduct the performance test under representative operating conditions for the coating

operation. Operations during periods of startup, shutdown, or malfunction and during periods of non operation do not constitute representative conditions. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation.

Testing performed on September 17, 2010 was conducted at representative coating application conditions as required by 40 CFR 63.4564(a)(1). Regenerative thermal oxidizer destruction efficiency tests were conducted at a low fuel input condition representing the worst-case mode of operation common to Exteria. The capture tests were not required. The coating application rates (gallons/hour) recorded during the tests are representative of daily application rates and are reported herein. These rates are comparable to those recorded daily in production logs.

(2) Representative emission capture system and add-on control device operating conditions. You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

40 CFR 63.4564(a)(2) requires that the emission capture system and add-on controls be operated at representative conditions as well. The capture system utilized at Exteria is designed to capture volatile organic components used as

carriers in the coatings. Coating Line No. 1 capture equipment consists of conveyor enclosures with exhaust fans and enclosed spray booths with exhaust fans. Coating Line No. 2 capture equipment consists of conveyor enclosures with exhaust fans, an open conveyor section with down-draft evacuation, and enclosed spray booths with exhaust fans. All fans and enclosures were operated at representative conditions typical of daily operations. The solvent concentrations in the air stream to the RTO during testing were representative of typical concentrations as well. This can be validated by comparing the reduction and application rates of coatings used during testing with the reduction and application rates recorded daily. General flow rates to the oxidizer were recorded during testing. Parametric Flow Monitoring System data has been included in the Appendix of this report for Coating Line 2.

The air-solvent mixtures collected in the capture systems are ducted to a common regenerative thermal oxidizer (RTO) where high temperature oxidation occurs, destroying the solvents and converting them to carbon dioxide and water. The oxidizer was operated in a manner typical of daily operations. The temperatures observed and recorded during the testing were representative of those recorded during daily operations. This can be validated by comparing test temperatures to those recorded on days during which similar rates of coatings were applied.

2.0 SAMPLING LOCATIONS

2.1 RTO Inlet

The inlet to the RTO is a 44-inch diameter duct with two sampling ports located at 90 degrees to one another. The ports are 13.1 diameters downstream and 7.0 diameters upstream of flow disturbance. Gas flow rate measurements and VOC concentration measurements were made through these ports in accordance with EPA Methods 1, 2, 3, and 25A. The moisture content of the gas streams was determined using wet-bulb/dry-bulb psychrometry.

2.2 RTO Stack

The stack exhausting the RTO is 42 inches in diameter. Two sampling ports are located at 90 degrees to one another in this stack. Gas flow rate measurements and VOC concentration measurements were made through these ports in accordance with EPA Methods 1, 2, 3, and 25A. The moisture content of the gas streams was determined using EPA Method 4.

3.0 SAMPLING PROCEDURES

The VOC destruction efficiency tests on the RTO were determined while Line No. 2 only was operating. The VOC destruction efficiency was determined by simultaneously measuring the mass (lb/hr) VOC flow rates at the inlet and outlet of the RTO. Three 60-minute test runs constituted the VOC destruction efficiency test. The VOC concentrations measured at both locations were reported as propane. No conversions were required based on solvent types or response factors as the RTO inlet and outlet measurements were both made using the same methodology and the destruction efficiency was calculated as a function of the two similar measurements.

The total gas flow rates at the inlet and outlet of the RTO were measured in accordance with EPA Methods 1, 2, and 3. The moisture content of the inlet gas stream was determined using wet-bulb/dry-bulb psychrometry and the moisture content of the outlet gas stream was determined in accordance with EPA Method 4. The VOC concentrations at both locations were simultaneously measured in accordance with EPA Method 25A.

All field data sheets and calculations associated with the VOC destruction efficiency test are included in the Appendix of this report.

4.0 SUMMARY OF RESULTS

A frequent operating condition of the Exteria coating process is to use only Line No. 2 to meet specific product orders and order scheduling. As a result, the destruction efficiency tests were conducted on the RTO on September 17, 2010 with only Line No. 2 (EU-004) operating. All three test runs were 60-minutes in duration.

The Material Use Records, including the VOC content of the coatings and thinners are included in the Appendix of this report. The average coating use during the September 17, 2010 test period averaged 31.7 gallons per hour.

The VOC destruction efficiency of the RTO was determined by simultaneously measuring the mass of VOCs (lb/hr) at the inlet and outlet of the RTO in accordance with EPA Method 25A. The data for the September 17, 2010 test period is summarized in Table 1.

During the period of testing, the VOC concentration at the inlet of the RTO averaged 1557 ppm (V/V), reported as propane and the VOC mass rate averaged 210 lb/hr, reported as propane. At the outlet of the RTO, the VOC concentration averaged 24.0 ppm (V/V, as propane) and the mass emission rate averaged 3.32 lb/hr. These data demonstrate a VOC destruction efficiency of 98.39 percent (based on

VOC mass) with destruction efficiencies ranging from 98.14 percent to 98.91 percent. These data are summarized in Table 1.

The results of the testing conducted on September 17, 2010 demonstrate that the RTO destruction efficiency is greater than the required 97 percent DE (Permit No. 0250407-013-AV, Specific Condition B.4(b)).

5.0 CONCLUSION

The Exteria facility is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart PPPP, *Surface Coating of Plastic Parts and Products*, for compliance and standards of performance including HAP emission limits, Continuous Parameter Monitoring System (CPMS) requirements and emissions capture and control demonstrations. The facility is also subject to FDEP Permit Nos. 0250407-013-AV. The Exteria coating operation has demonstrated compliance with all of the requirements of the above cited NESHAP performance standards and the conditions of the FDEP Title V and Air Construction permits. The RTO Destruction Efficiency, during the September 17, 2010 period of testing with Line No. 2 operating, averaged 98.39 percent. The destruction efficiency exceeds the required 97 percent destruction efficiency of Permit No. 0250407-013-AV, Specific Condition B.4(b).

Based upon the results presented herein, it can be concluded that during the period of testing on September 17, 2010, the Exteria facility was operating in compliance with the emission limiting standards set forth in Permit No. 0250407-013-AV.

Table 1

RTO Destruction Efficiency Test

Exteria Building Products Miami, Florida RTO Destruction Efficiency Test Coating Line No. 2 September 17, 2010									
	RTO Inlet				RTO Outlet				VOC
Run	Temp.	Flow (1)	Total Hydrocarbon as Propane		Temp.	Flow (1)	Total Hydrocarbon as Propane		Destruction Efficiency (2)
No.	(F°)	(scfm)	(ppm)	(lb/Hr)	(F°)	(scfm)	(ppm)	(lb/Hr)	(%)
1	93.0	20101	1359	187	194	20632	24.6	3.48	98.14
2	95.0	19360	1581	210	203	20731	27.7	3.94	98.12
3	96.0	19727	1732	234	174	18962	19.6	2.54	98.91
Avg.	94.7	19729	1557	210	190	20108	24.0	3.32	98.39

(1) Standard cubic feet per minute; wet basis

(2) Based on hydrocarbon masses at RTO inlet and outlet. DE%=(Inlet-lb/hr)-(Outlet-lb/hr)/(Inlet-lb/hr)x100

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APPENDIX

A. Coating Line 2 RTO Destruction Efficiency Tests 09/17/2010
   - A-1 Calculations
   - A-2 Gas Flow Inlet/Outlet
   - A-3 THC Monitoring Data
   - A-4 Field Data Sheets

B. Plant Operating Data
   - B-1 Plant Operating Logs and RTO Temperatures
   - B-2 Coatings MSDS

C. Flow Sampling Equipment Calibration Information

D. Calibration Gas Certifications

E. Project Participants

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

A-1

Coating Line 2 RTO
Destruction Efficiency Tests
09/17/2010

CALCULATIONS

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

A-2

Coating Line 2 RTO
Destruction Efficiency Tests
09/17/2010

GAS FLOW

INLET/OUTLET

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Summary of Flow Data

Exteria Building Products, LLC.		Location:	Miami, FL		
Source:	Line No. 2, RTO	Date:	September 17, 2010		
	Flow			Temperature	Moisture
Run / Location	(acfm)	(scfm)	(dscfm)	(F^{o})	(%)
Run 1 IN	21,271	20,101	19,500	93	2.99
Run 1 OUT	25,604	20,632	20,005	194	3.04
Run 2 IN	20,561	19,360	18,794	95	2.92
Run 2 OUT	26,064	20,731	20,093	203	3.07
Run 3 IN	20,989	19,727	19,159	96	2.88
Run 3 OUT	22,781	18,962	18,362	174	3.16

Company: Exteria Building Products, LLC. Location: Miami, FL Test Basis: FLOW RATE 78
Source: RTO Outlet Date: September 17, 2010 Meter Box Y 0.995
Barometric Pressure 29.9 Pb(in-Hg)

EPA Method 4 (Stack Gas Moisture Fraction Calculation)

Date	Run No.	Initial Meter Reading	Final Meter Reading	Total Meter Volume (ft3)	Condensate Gain in Impingers (ml)	Silica Gel Weight Gain (g)	Total Moisture Gain Vlc (ml)	Gas Meter Temperature (oF)	Delta H (in-H2O)	Standard Dry-gas Volume Vm (ft^3)	Standard Water Vapor Vol. Vw(ft^3)	Stack Moisture (%)
	1	493	535.548	42.55	19	9	28	74	1.6	42.00	1.32	3.04
	2	536	579.880	43.88	21	8	29	77.3	1.6	43.05	1.37	3.07
	3	579.994	624.068	44.07	22	8	30	77.6	1.6	43.21	1.41	3.16
	4			0.00			0			0.00	0.00	#DIV/0!
	5			0.00			0			0.00	0.00	#DIV/0!
	6			0.00			0			0.00	0.00	#DIV/0!
	7			0.00			0			0.00	0.00	#DIV/0!
	8			0.00			0			0.00	0.00	#DIV/0!
	9			0.00			0			0.00	0.00	#DIV/0!

Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))

Vw (Stnd) = 0.0471 * Vlc

Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))

Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Inlet Coating Line No. 2	Date:	September 17, 2010
Run:	1	Filename:	
Points:	24	Test start:	
Sqrt.Dp=	0.5777	Test End:	
$T(s)_{avg.}$=	93.00		

Stack Parameters				
Data Point	Velocity Head	Gas Temp.		
1	0.25	93	Pb =	29.9 in Hg
2	0.32	93	Ps =	-3.9 in H2O
3	0.32	93	%O2 =	20.8 %
4	0.35	93	%CO2 =	0.0 %
5	0.37	93	%Moist =	2.99 %
6	0.39	93	Stack Dia=	44 in
7	0.37	93	or	
8	0.36	93	Stack L =	0 in
9	0.36	93	Stack W =	0 in
10	0.37	93	PPM CO =	0 ppm
11	0.32	93	PPM NOx =	0 ppm
12	0.31	93	PPM SO2 =	0 ppm
13	0.30	93	PPM THC =	ppm
14	0.34	93	Vm =	0 ft3
15	0.35	93	dH =	0 in H2O
16	0.37	93	Tm =	0 F
17	0.38	93	Y =	0
18	0.40	93	Vlc =	0 ml
19	0.38	93		
20	0.35	93		
21	0.35	93		
22	0.25	93		
23	0.25	93		
24	0.24	93		
25	0.00	0		

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Inlet	Date:	September 17, 2010
Run:	1	Filename:	

Flow:

Stack area =	10.56	ft^2	
vs =	33.57	FT/SEC	
Q =	21,271	acfm -	not corrected
Q(stnd) =	19,500	dscfm -	both temperature and moisture corrected
Q(moist)=	20,423	dcfm -	only moisture corrected
Q(temp) =	20,101	scfm -	only temperature corrected

Moisture

Vm(Std) =	0	
Vw(Std) =	0	
Bws =	#DIV/0!	Lower Bws
Bws @sat =	0.09288752	Value used
Percent Moist =	2.99	

Emission Rates:

CO =	0.0000	lb/hr	
NOx =	0.0000	lb/hr	as NO2
SO2 =	0.0000	lb/hr	
THC =	0.0000	lb/hr as Propane	

EQUATIONS REFERENCES :

Round Stack Area = (PI*(Stack Dia/12)^2)/4

Square Stack Area = (Stack L/12)*(Stack W/12)

Md = (.44*%CO2)+(.32*%O2)+(.28*(100-(%CO2+%O2)))

Ms = (Md*(1-%Moist))+(18*%Moist)

P(stack) = Pb+(Ps/13.6)

vs = (85.49)*(0.85)*(Sqrt.Dp)*(Sqrt[(T(s)+460)/(Ms*P(stack))])

Q = vs * As * 60

Q(stnd) = Q*(1-%Moist)*(528/(Ts+460))*(P(stack)/29.92)

Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))

Vw (Stnd) = 0.0471 * Vlc

Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))

Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps

CO (lb/hr) = ((PPM CO)*Q(stnd)*28.01*60)/(385*10^6)

NOx (lb/hr) = ((PPM NOx)*Q(stnd)*46.006*60)/(385*10^6)

SO2 (lb/hr) = ((PPM SO2)*Q(stnd)*64.0648*60)/(385*10^6)

THC (lb/hr) = ((PPM THC)*Q(temp)*44.0965*60)/(385*10^6)

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Outlet Coating Line No. 2	Date:	September 17, 2010
Run:	1	Filename:	
Points:	24	Test start:	
Sqrt.Dp=	0.7046	Test End:	
$T(s)_{avg.}$=	194.38		

Stack Parameters				
Data Point	Velocity Head	Gas Temp.		
1	0.22	209	Pb =	29.9 in Hg
2	0.40	219	Ps =	-0.25 in H2O
3	0.28	237	%O2 =	20.8 %
4	0.32	248	%CO2 =	0.0 %
5	0.40	250	%Moist =	3.0 %
6	0.42	262	Stack Dia=	42 in
7	0.65	205	or	
8	0.76	193	Stack L =	0 in
9	0.79	174	Stack W =	0 in
10	0.73	173	PPM CO =	0 ppm
11	0.45	172	PPM NOx =	0 ppm
12	0.29	169	PPM SO2 =	0 ppm
13	0.35	220	PPM THC =	0 ppm
14	0.36	231	Vm =	0 ft3
15	0.38	233	dH =	0 in H2O
16	0.40	188	Tm =	0 F
17	0.35	183	Y =	0
18	0.55	168	Vlc =	0 ml
19	0.72	161		
20	0.77	174		
21	0.78	151		
22	0.68	149		
23	0.73	148		
24	0.55	148		
25	0.00	0		

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Outlet	Date:	September 17, 2010
Run:	1	Filename:	

Flow:

Stack area =	9.62	ft^2	
vs =	44.35	FT/SEC	
Q =	25,604	acfm -	not corrected
Q(stnd) =	20,005	dscfm -	both temperature and moisture corrected
Q(moist)=	24,793	dcfm -	only moisture corrected
Q(temp) =	20,632	scfm -	only temperature corrected

Moisture

Vm(Std) =	0	
Vw(Std) =	0	
Bws =	#DIV/0!	Lower Bws
Bws @sat =	0	Value used
Percent Moist =	3.04	

Emission Rates:

CO =	0.0000	lb/hr	
NOx =	0.0000	lb/hr	as NO2
SO2 =	0.0000	lb/hr	
THC =	0.0000	lb/hr as Propane	

EQUATIONS REFERENCES :

Round Stack Area = (PI*(Stack Dia/12)^2)/4

Square Stack Area = (Stack L/12)*(Stack W/12)

Md = (.44*%CO2)+(.32*%O2)+(.28*(100-(%CO2+%O2)))

Ms = (Md*(1-%Moist))+(18*%Moist)

P(stack) = Pb+(Ps/13.6)

vs = (85.49)*(0.85)*(Sqrt.Dp)*(Sqrt[(T(s)+460)/(Ms*P(stack))])

Q = vs * As * 60

Q(stnd) = Q*(1-%Moist)*(528/(Ts+460))*(P(stack)/29.92)

Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))

Vw (Stnd) = 0.0471 * Vlc

Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))

Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps

CO (lb/hr) = ((PPM CO)*Q(stnd)*28.01*60)/(385*10^6)

NOx (lb/hr) = ((PPM NOx)*Q(stnd)*46.006*60)/(385*10^6)

SO2 (lb/hr) = ((PPM SO2)*Q(stnd)*64.0648*60)/(385*10^6)

THC (lb/hr) = ((PPM THC)*Q(temp)*44.0965*60)/(385*10^6)

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Inlet Coating Line No. 2	Date:	September 17, 2010
Run:	2	Filename:	
Points:	24	Test start:	
Sqrt.Dp=	0.5574	Test End:	
$T(s)_{avg}$=	95.00		

Stack Parameters				
Data Point	Velocity Head	Gas Temp.		
1	0.21	95	Pb =	29.9 in Hg
2	0.25	95	Ps =	-3.9 in H2O
3	0.30	95	%O2 =	20.8 %
4	0.35	95	%CO2 =	0.0 %
5	0.36	95	%Moist =	2.92 %
6	0.38	95	Stack Dia=	44 in
7	0.37	95	or	
8	0.36	95	Stack L =	0 in
9	0.31	95	Stack W =	0 in
10	0.28	95	PPM CO =	0 ppm
11	0.26	95	PPM NOx =	0 ppm
12	0.23	95	PPM SO2 =	0 ppm
13	0.26	95	PPM THC =	0 ppm
14	0.29	95	Vm =	0 ft3
15	0.33	95	dH =	0 in H2O
16	0.36	95	Tm =	0 F
17	0.38	95	Y =	0
18	0.40	95	Vlc =	0 ml
19	0.37	95		
20	0.38	95		
21	0.35	95		
22	0.31	95		
23	0.25	95		
24	0.19	95		
25	0.00	0		

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Inlet	Date:	September 17, 2010
Run:	2	Filename:	

Flow:

vs =	32.45	FT/SEC		As =	10.56 ft^2
Q =	20,561	acfm -	not corrected		
Q(stnd) =	18,794	dscfm -	both temperature and moisture corrected		
Q(moist)=	19,756	dcfm -	only moisture corrected		
Q(temp) =	19,360	scfm -	only temperature corrected		

Moisture

Vm(Std) =	0	Bws =	#DIV/0! Lower Bws
Vw(Std) =	0	Bws @sat =	0.09835129 Value used
		Percent Moist =	2.92

Emission Rates:	CO =	0.0000	lb/hr
	NOx =	0.0000	lb/hr as NO2
	SO2 =	0.0000	lb/hr
	THC =	0.0000	lb/hr as Propane

EQUATIONS REFERENCES :

Round Stack Area = (PI*(Stack Dia/12)^2)/4
Square Stack Area = (Stack L/12)*(Stack W/12)
Md = (.44*%CO2)+(.32*%O2)+(.28*(100-(%CO2+%O2)))
Ms = (Md*(1-%Moist))+(18*%Moist)
P(stack) = Pb+(Ps/13.6)
vs = (85.49)*(0.85)*(Sqrt.Dp)*(Sqrt[(T(s)+460)/(Ms*P(stack))])
Q = vs * As * 60
Q(stnd) = Q*(1-%Moist)*(528/(Ts+460))*(P(stack)/29.92)
Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))
Vw (Stnd) = 0.0471 * Vlc
Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))
Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps
CO (lb/hr) = ((PPM CO)*Q(stnd)*28.01*60)/(385*10^6)
NOx (lb/hr) = ((PPM NOx)*Q(stnd)*46.006*60)/(385*10^6)
SO2 (lb/hr) = ((PPM SO2)*Q(stnd)*64.0648*60)/(385*10^6)
THC (lb/hr) = ((PPM THC)*Q(temp)*44.0965*60)/(385*10^6)

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Outlet Coating Line No. 2	Date:	September 17, 2010
Run:	2	Filename:	
Points:	24	Test start:	
Sqrt.Dp=	0.7126	Test End:	
$T(s)_{avg.}$=	203.00		

Stack Parameters

Data Point	Velocity Head	Gas Temp.		
1	0.19	211	Pb =	29.9 in Hg
2	0.40	215	Ps =	-0.25 in H2O
3	0.27	218	%O2 =	20.8 %
4	0.28	221	%CO2 =	0.0 %
5	0.30	229	%Moist =	3.07 %
6	0.41	240	Stack Dia=	42 in
7	0.59	225	or	
8	0.74	214	Stack L =	0 in
9	0.87	210	Stack W =	0 in
10	0.82	193	PPM CO =	0 ppm
11	0.43	185	PPM NOx =	0 ppm
12	0.40	176	PPM SO2 =	0 ppm
13	0.35	166	PPM THC =	0 ppm
14	0.39	166	Vm =	0 ft3
15	0.31	178	dH =	0 in H2O
16	0.32	183	Tm =	0 F
17	0.30	188	Y =	0
18	0.27	192	Vlc =	0 ml
19	0.59	203		
20	0.85	220		
21	1.00	207		
22	1.10	211		
23	0.92	205		
24	0.88	216		
25	0.00	0		

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Outlet	Date:	September 17, 2010
Run:	2	Filename:	

Flow:

vs =	45.15	FT/SEC		As =	9.62 ft^2
Q =	26,064	acfm -	not corrected		
Q(stnd) =	20,093	dscfm -	both temperature and moisture corrected		
Q(moist)=	25,231	dcfm -	only moisture corrected		
Q(temp) =	20,731	scfm -	only temperature corrected		

Moisture

Vm(Std) =	0	Bws =	#DIV/0!	Lower Bws
Vw(Std) =	0	Bws @sat =	0	Value used
		Percent Moist =	3.07	

Emission Rates:	CO =	0.0000	lb/hr
	NOx =	0.0000	lb/hr as NO2
	SO2 =	0.0000	lb/hr
	THC =	0.0000	lb/hr as Propane

EQUATIONS REFERENCES :

Round Stack Area = (PI*(Stack Dia/12)^2)/4
Square Stack Area = (Stack L/12)*(Stack W/12)
Md = (.44*%CO2)+(.32*%O2)+(.28*(100-(%CO2+%O2)))
Ms = (Md*(1-%Moist))+(18*%Moist)
P(stack) = Pb+(Ps/13.6)
vs = (85.49)*(0.85)*(Sqrt.Dp)*(Sqrt[(T(s)+460)/(Ms*P(stack))])
Q = vs * As * 60
Q(stnd) = Q*(1-%Moist)*(528/(Ts+460))*(P(stack)/29.92)
Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))
Vw (Stnd) = 0.0471 * Vlc
Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))
Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps
CO (lb/hr) = ((PPM CO)*Q(stnd)*28.01*60)/(385*10^6)
NOx (lb/hr) = ((PPM NOx)*Q(stnd)*46.006*60)/(385*10^6)
SO2 (lb/hr) = ((PPM SO2)*Q(stnd)*64.0648*60)/(385*10^6)
THC (lb/hr) = ((PPM THC)*Q(temp)*44.0965*60)/(385*10^6)

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Inlet Coating Line No. 2	Date:	September 17, 2010
Run:	3	Filename:	
Points:	24	Test start:	
Sqrt.Dp=	0.5686	Test End:	
$T(s)_{avg.}$=	96.00		

Stack Parameters

Data Point	Velocity Head	Gas Temp.
1	0.31	96
2	0.30	96
3	0.32	96
4	0.33	96
5	0.33	96
6	0.35	96
7	0.35	96
8	0.35	96
9	0.33	96
10	0.26	96
11	0.22	96
12	0.22	96
13	0.70	96
14	0.32	96
15	0.34	96
16	0.36	96
17	0.36	96
18	0.37	96
19	0.36	96
20	0.35	96
21	0.30	96
22	0.30	96
23	0.23	96
24	0.22	96
25	0.00	0

Pb =	29.9 in Hg
Ps =	-3.9 in H2O
%O2 =	20.8 %
%CO2 =	0 %
%Moist =	2.88 %
Stack Dia=	44 in
or	
Stack L =	0 in
Stack W =	0 in
PPM CO =	0 ppm
PPM NOx =	0 ppm
PPM SO2 =	0 ppm
PPM THC =	0 ppm
Vm =	0 ft3
dH =	0 in H2O
Tm =	0 F
Y =	0
Vlc =	0 ml

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Inlet	Date:	September 17, 2010
Run:	3	Filename:	

Flow:

vs =	33.13	FT/SEC		As =	10.56 ft^2
Q =	20,989	acfm -	not corrected		
Q(stnd) =	19,159	dscfm -	both temperature and moisture corrected		
Q(moist)=	20,175	dcfm -	only moisture corrected		
Q(temp) =	19,727	scfm -	only temperature corrected		

Moisture

Vm(Std) =	0	Bws =	#DIV/0!	Lower Bws
Vw(Std) =	0	Bws @sat =	0.10118111	Value used
		Percent Moist =	2.88	

Emission Rates:	CO =	0.0000	lb/hr	
	NOx =	0.0000	lb/hr	as NO2
	SO2 =	0.0000	lb/hr	
	THC =	0.0000	lb/hr as Propane	

EQUATIONS REFERENCES :

Round Stack Area = (PI*(Stack Dia/12)^2)/4
Square Stack Area = (Stack L/12)*(Stack W/12)
Md = (.44*%CO2)+(.32*%O2)+(.28*(100-(%CO2+%O2)))
Ms = (Md*(1-%Moist))+(18*%Moist)
P(stack) = Pb+(Ps/13.6)
vs = (85.49)*(0.85)*(Sqrt.Dp)*(Sqrt[(T(s)+460)/(Ms*P(stack))])
Q = vs * As * 60
Q(stnd) = Q*(1-%Moist)*(528/(Ts+460))*(P(stack)/29.92)
Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))
Vw (Stnd) = 0.0471 * Vlc
Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))
Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps
CO (lb/hr) = ((PPM CO)*Q(stnd)*28.01*60)/(385*10^6)
NOx (lb/hr) = ((PPM NOx)*Q(stnd)*46.006*60)/(385*10^6)
SO2 (lb/hr) = ((PPM SO2)*Q(stnd)*64.0648*60)/(385*10^6)
THC (lb/hr) = ((PPM THC)*Q(temp)*44.0965*60)/(385*10^6)

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Outlet Coating Line No. 2	Date:	September 17, 2010
Run:	3	Filename:	
Points:	24	Test start:	
Sqrt.Dp=	0.6370	Test End:	
$T(s)_{avg.}$=	173.50		

Stack Parameters				
Data Point	Velocity Head	Gas Temp.		
1	0.34	213	Pb =	29.9 in Hg
2	0.34	191	Ps =	-0.25 in H2O
3	0.33	174	%O2 =	20.8 %
4	0.31	167	%CO2 =	0 %
5	0.30	158	%Moist =	3.16 %
6	0.37	154	Stack Dia=	42 in
7	0.55	150	or	
8	0.67	149	Stack L =	0 in
9	0.75	149	Stack W =	0 in
10	0.72	150	PPM CO =	0 ppm
11	0.59	152	PPM NOx =	0 ppm
12	0.52	153	PPM SO2 =	0 ppm
13	0.20	231	PPM THC =	0 ppm
14	0.19	205	Vm =	0 ft3
15	0.21	207	dH =	0 in H2O
16	0.22	197	Tm =	0 F
17	0.24	195	Y =	0
18	0.29	190	Vlc =	0 ml
19	0.49	195		
20	0.49	157		
21	0.62	159		
22	0.57	152		
23	0.50	154		
24	0.34	162		
25	0.00	0		

Company:	Exteria Building Products, LLC.	Location:	Miami, FL
Source:	RTO Outlet	Date:	September 17, 2010
Run:	3	Filename:	

Flow:

vs =	39.46	FT/SEC		As =	9.62 ft^2
Q =	22,781	acfm -	not corrected		
Q(stnd) =	18,362	dscfm -	both temperature and moisture corrected		
Q(moist)=	22,031	dcfm -	only moisture corrected		
Q(temp) =	18,962	scfm -	only temperature corrected		

Moisture

Vm(Std) =	0	Bws =	#DIV/0!	Lower Bws
Vw(Std) =	0	Bws @sat =	0.67837693	Value used
		Percent Moist =	3.16	

Emission Rates:

CO =	0.0000	lb/hr	
NOx =	0.0000	lb/hr	as NO2
SO2 =	0.0000	lb/hr	
THC =	0.0000	lb/hr as Propane	

EQUATIONS REFERENCES :

Round Stack Area = (PI*(Stack Dia/12)^2)/4
Square Stack Area = (Stack L/12)*(Stack W/12)
Md = (.44*%CO2)+(.32*%O2)+(.28*(100-(%CO2+%O2)))
Ms = (Md*(1-%Moist))+(18*%Moist)
P(stack) = Pb+(Ps/13.6)
vs = (85.49)*(0.85)*(Sqrt.Dp)*(Sqrt[(T(s)+460)/(Ms*P(stack))])
Q = vs * As * 60
Q(stnd) = Q*(1-%Moist)*(528/(Ts+460))*(P(stack)/29.92)
Vm (Stnd) = 17.6471 * Vm * Y * ((Pb+(dH/13.6))/(Tm+460))
Vw (Stnd) = 0.0471 * Vlc
Bws = (Vw(Stnd) / (Vm(Stnd)+ Vw(Stnd))
Bws @ Sat = Vap. Pressure of H2O @ Dew Point Temp/Ps
CO (lb/hr) = ((PPM CO)*Q(stnd)*28.01*60)/(385*10^6)
NOx (lb/hr) = ((PPM NOx)*Q(stnd)*46.006*60)/(385*10^6)
SO2 (lb/hr) = ((PPM SO2)*Q(stnd)*64.0648*60)/(385*10^6)
THC (lb/hr) = ((PPM THC)*Q(temp)*44.0965*60)/(385*10^6)

A-3

Coating Line 2 RTO
Destruction Efficiency Tests
09/17/2010

THC

MONITORING DATA

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Exteria Building Products
Miami, Florida
Coating Line No. 2 **Run 1**
RTO Destruction Efficiency Test

Date & Time	THC	CH4	NMHC
9/17/2010 8:18	0.50	1.64	0.00
9/17/2010 8:19	3.00	201.26	0.00
9/17/2010 8:20	746.02	448.11	10.99
9/17/2010 8:21	3207.75	240.03	15.15
9/17/2010 8:22	2935.05	18.94	12.69
9/17/2010 8:23	2937.56	47.48	9.28
9/17/2010 8:24	2487.24	204.67	8.71
9/17/2010 8:25	1033.72	323.49	14.58
9/17/2010 8:26	1028.72	356.31	20.27
9/17/2010 8:27	783.55	354.42	18.56
9/17/2010 8:28	513.36	505.05	17.80
9/17/2010 8:29	513.36	505.05	20.64
9/17/2010 8:30	315.72	134.34	23.67
9/17/2010 8:31	-2.00	66.67	10.99
9/17/2010 8:32	-2.00	192.17	10.42
9/17/2010 8:33	50.54	343.69	14.58
9/17/2010 8:34	158.11	355.05	19.32
9/17/2010 8:35	163.11	1.64	15.91
9/17/2010 8:36	170.62	0.63	5.11
9/17/2010 8:37	173.12	0.25	2.65
9/17/2010 8:38	173.12	0.00	1.89
9/17/2010 8:39	165.62	0.13	1.33
9/17/2010 8:40	163.11	0.00	0.76
9/17/2010 8:41	165.62	0.00	0.57
9/17/2010 8:42	165.62	0.00	0.38
9/17/2010 8:43	165.62	104.55	12.88
9/17/2010 8:44	163.11	124.24	114.39
9/17/2010 8:45	165.62	122.10	115.15
9/17/2010 8:46	165.62	104.29	109.85
9/17/2010 8:47	168.12	104.80	101.33
9/17/2010 8:48	170.62	104.80	101.33
9/17/2010 8:49	168.12	97.73	101.33
9/17/2010 8:50	170.62	73.74	78.03
9/17/2010 8:51	200.64	55.05	54.74
9/17/2010 8:52	218.15	54.67	52.65
9/17/2010 8:53	218.15	52.67	51.89
9/17/2010 8:54	215.65	52.42	52.65
9/17/2010 8:55	275.69	39.90	52.08
9/17/2010 8:56	370.76	12.50	26.89
9/17/2010 8:57	273.19	10.86	10.80
9/17/2010 8:58	238.17	10.73	9.77
9/17/2010 8:59	208.15	10.73	9.77
9/17/2010 9:00	198.14	10.86	9.77
9/17/2010 9:01	188.13	7.45	9.47
9/17/2010 9:02	293.21	2.65	3.98
9/17/2010 9:03	305.71	0.00	0.95
9/17/2010 9:04	238.17	0.00	0.00
9/17/2010 9:05	203.14	0.00	0.00

<< Zero Air Inlet		
THC	CH4	NMHC
1.75	101.45	0.0

<< 2935 Propane Inlet		
THC	CH4	NMHC
2936.3	33.2	12.7

<< 1017 Propane Inlet		
THC	CH4	NMHC
1031.2	339.9	14.6

<< 513.4 Propane Inlet		
THC	CH4	NMHC
513.4	505.1	17.8

<< Zero Air Inlet		
THC	CH4	NMHC
-2.00	129.42	10.7

<< Zero Air Outlet		
THC	CH4	NMHC
164.37	0.00	0.7

<< 100.5 Propane Outlet		
THC	CH4	NMHC
169.4	101.3	101.3

<< 49.9 Propane Outlet		
THC	CH4	NMHC
216.9	52.5	52.3

<< 9.97 Propane Outlet		
CH4	NMHC	THC
223.2	10.7	9.8

<< Zero Air Outlet		
THC	CH4	NMHC
220.65	0.00	0.0

	Inlet		Outlet	
9/17/2010 10:04	1704.19	1.14	40.91	<< Start Run 1
9/17/2010 10:05	1654.16	1.26	44.70	
9/17/2010 10:06	1521.57	1.01	22.35	
9/17/2010 10:07	1526.57	1.39	23.11	
9/17/2010 10:08	1486.54	1.26	30.49	
9/17/2010 10:09	1474.03	0.76	37.12	
9/17/2010 10:10	1446.51	1.14	31.44	
9/17/2010 10:11	1401.48	1.14	21.97	
9/17/2010 10:12	1431.50	1.01	24.81	
9/17/2010 10:13	1439.01	1.14	25.38	
9/17/2010 10:14	1413.99	1.14	15.91	
9/17/2010 10:15	1406.48	1.39	16.67	
9/17/2010 10:16	1406.48	1.77	24.43	
9/17/2010 10:17	1388.97	2.15	30.30	
9/17/2010 10:18	1434.00	1.26	28.03	
9/17/2010 10:19	1426.50	1.01	17.99	
9/17/2010 10:20	1373.96	1.01	22.54	
9/17/2010 10:21	1383.97	1.01	22.35	
9/17/2010 10:22	1366.46	1.01	15.72	
9/17/2010 10:23	1388.97	1.14	14.02	
9/17/2010 10:24	1418.99	3.03	23.86	
9/17/2010 10:25	1386.47	2.65	39.21	
9/17/2010 10:26	1366.46	1.52	25.38	
9/17/2010 10:27	1356.45	1.01	16.67	
9/17/2010 10:28	1378.97	1.01	20.64	
9/17/2010 10:29	1351.45	0.63	21.21	
9/17/2010 10:30	1338.94	0.63	17.05	
9/17/2010 10:31	1368.96	1.01	12.69	
9/17/2010 10:32	1361.45	13.26	19.51	
9/17/2010 10:33	1358.95	6.82	65.72	
9/17/2010 10:34	1318.92	1.14	26.71	
9/17/2010 10:35	1381.47	1.14	17.42	
9/17/2010 10:36	1388.97	1.14	18.37	
9/17/2010 10:37	1348.94	1.14	27.08	
9/17/2010 10:38	1366.46	0.76	33.33	
9/17/2010 10:39	1313.92	1.01	14.96	
9/17/2010 10:40	1276.39	10.35	15.53	
9/17/2010 10:41	1306.41	11.74	52.46	
9/17/2010 10:42	1288.90	1.52	33.52	
9/17/2010 10:43	1283.90	1.01	17.42	
9/17/2010 10:44	1311.42	1.01	16.48	
9/17/2010 10:45	1261.38	1.14	22.73	
9/17/2010 10:46	1298.91	1.14	39.21	
9/17/2010 10:47	1283.90	1.01	16.10	
9/17/2010 10:48	1273.89	11.24	14.77	
9/17/2010 10:49	1253.88	29.04	35.99	
9/17/2010 10:50	1266.39	2.15	37.12	
9/17/2010 10:51	1298.91	1.14	17.05	
9/17/2010 10:52	1298.91	1.01	14.39	
9/17/2010 10:53	1261.38	1.39	19.32	
9/17/2010 10:54	1273.89	1.39	34.09	
9/17/2010 10:55	1271.39	1.14	20.46	
9/17/2010 10:56	1286.40	3.91	14.02	

	In		Out	
9/17/2010 10:57	1286.40	37.00	23.49	
9/17/2010 10:58	1288.90	5.68	36.17	
9/17/2010 10:59	1296.41	1.39	15.53	
9/17/2010 11:00	1303.91	1.14	13.45	
9/17/2010 11:01	1286.40	1.77	18.18	
9/17/2010 11:02	1243.87	2.78	27.08	
9/17/2010 11:03	1241.37	1.01	23.11	
9/17/2010 11:04	1263.89	1.01	13.45	<< End Run 1
9/17/2010 11:05	1268.89	22.85	16.29	
9/17/2010 11:06	1266.39	10.48	34.47	
9/17/2010 11:07	1276.39	0.76	8.33	
9/17/2010 11:08	1251.38	0.00	2.84	
9/17/2010 11:09	1226.36	0.00	1.33	
9/17/2010 11:10	1218.85	0.00	0.76	
9/17/2010 11:11	963.68	0.00	0.00	<< Zero Air Outlet
9/17/2010 11:12	700.99	0.00	0.00	THC / CH4 / NMHC
9/17/2010 11:13	535.88	0.13	0.00	832.33 / 0.00 / 0.0
9/17/2010 11:14	443.31	0.00	0.00	
9/17/2010 11:15	385.77	2.78	0.00	
9/17/2010 11:16	353.25	11.24	4.92	
9/17/2010 11:17	323.23	11.24	9.28	<< 9.97 Propane Outlet
9/17/2010 11:18	305.71	11.24	9.28	THC / CH4 / NMHC
9/17/2010 11:19	240.67	11.24	9.47	314.5 / 11.2 / 9.3
9/17/2010 11:20	13.01	164.27	9.47	
9/17/2010 11:20	13.01	164.27	9.47	
9/17/2010 11:21	8.01	190.40	8.33	<< Zero Air Inlet
9/17/2010 11:22	3.00	25.38	3.22	THC / CH4 / NMHC
9/17/2010 11:23	503.35	105.43	7.01	5.50 / 107.89 / 5.8
9/17/2010 11:24	1026.22	206.19	14.96	<< 1017 Propane Inlet
9/17/2010 11:25	1026.22	162.25	15.72	THC / CH4 / NMHC
				1026.2 / 184.2 / 15.0

Run 1 Average Concentration	Inlet THC ppm	Outlet NMHC ppm
	1358.8	24.6

Exteria Building Products
Miami, Florida
Coating Line No. 2 IN OUT **Run 2**
RTO Destruction Efficiency Test

Date & Time	THC	CH4	NMHC	
9/17/2010 11:53	1173.82	67.68	24.81	<< Start Run 2
9/17/2010 11:54	1253.88	43.18	76.71	
9/17/2010 11:55	1263.89	3.54	46.59	
9/17/2010 11:56	1303.91	3.66	26.71	
9/17/2010 11:57	1323.93	48.61	33.71	
9/17/2010 11:58	1371.46	11.11	45.08	
9/17/2010 11:59	1356.45	2.65	27.08	
9/17/2010 12:00	1378.97	1.77	24.05	
9/17/2010 12:01	1373.96	30.93	34.47	
9/17/2010 12:02	1346.44	81.31	61.17	
9/17/2010 12:03	1391.47	1.77	53.98	
9/17/2010 12:04	1386.47	1.26	23.30	
9/17/2010 12:05	1464.03	184.72	32.39	
9/17/2010 12:06	1549.08	93.69	56.63	
9/17/2010 12:07	1581.61	1.52	22.54	
9/17/2010 12:08	1576.60	1.14	20.08	
9/17/2010 12:09	1621.64	3.16	27.65	
9/17/2010 12:10	1616.63	28.03	43.37	
9/17/2010 12:11	1639.15	4.04	53.79	
9/17/2010 12:12	1699.19	1.14	17.24	
9/17/2010 12:13	1641.65	1.39	26.14	
9/17/2010 12:14	1676.67	1.39	41.67	
9/17/2010 12:15	1641.65	0.76	24.43	
9/17/2010 12:16	1669.17	1.14	13.64	
9/17/2010 12:17	1666.67	1.14	18.18	
9/17/2010 12:18	1684.18	0.76	28.60	
9/17/2010 12:19	1671.67	0.63	41.48	
9/17/2010 12:20	1639.15	0.88	14.58	
9/17/2010 12:21	1646.65	1.26	17.05	
9/17/2010 12:22	1656.66	1.14	27.84	
9/17/2010 12:23	1671.67	0.63	25.57	
9/17/2010 12:24	1691.68	0.63	11.36	
9/17/2010 12:25	1694.19	1.01	10.04	
9/17/2010 12:26	1691.68	0.51	19.32	
9/17/2010 12:27	1681.68	0.38	29.36	
9/17/2010 12:28	1694.19	0.63	15.72	
9/17/2010 12:29	1691.68	0.63	10.80	
9/17/2010 12:30	1666.67	1.14	18.18	
9/17/2010 12:31	1586.61	0.25	25.76	
9/17/2010 12:32	1664.17	0.51	11.17	
9/17/2010 12:33	1696.69	0.88	6.63	
9/17/2010 12:34	1686.68	0.76	11.36	
9/17/2010 12:35	1711.70	0.13	19.70	
9/17/2010 12:36	1614.13	0.13	15.91	
9/17/2010 12:37	1686.68	0.76	7.01	
9/17/2010 12:38	1616.63	1.14	18.56	
9/17/2010 12:39	1644.15	0.51	109.09	

	In		Out	
9/17/2010 12:40	1644.15	0.25	16.86	
9/17/2010 12:41	1611.63	0.51	6.06	
9/17/2010 12:42	1594.12	1.14	6.25	
9/17/2010 12:43	1654.16	0.13	11.74	
9/17/2010 12:44	1651.66	0.13	15.91	
9/17/2010 12:45	1604.12	0.51	5.68	
9/17/2010 12:46	1639.15	0.63	4.92	
9/17/2010 12:47	1591.61	0.51	155.30	
9/17/2010 12:48	1664.17	0.13	62.50	
9/17/2010 12:49	1614.13	0.25	6.06	
9/17/2010 12:50	1621.64	0.63	4.17	
9/17/2010 12:51	1639.15	0.25	5.87	
9/17/2010 12:52	1611.63	0.13	15.53	
9/17/2010 12:53	1629.14	0.13	5.11	<< End Run 2
9/17/2010 12:54	1659.16	8.97	3.79	
9/17/2010 12:55	1566.60	21.47	92.80	
9/17/2010 12:56	1671.67	0.13	84.28	
9/17/2010 12:57	1421.50	0.13	2.65	
9/17/2010 12:58	1036.23	0.13	0.57	
9/17/2010 12:59	793.56	0.13	0.00	<< Zero Air Outlet
9/17/2010 13:00	623.44	0.13	0.00	THC / CH4 / NMHC
9/17/2010 13:01	518.36	3.28	0.00	708.50 / 0.13 / 0.0
9/17/2010 13:02	465.83	11.49	5.30	
9/17/2010 13:03	430.80	11.36	9.47	<< 9.97 Propane Outlet
9/17/2010 13:04	393.28	11.36	9.47	THC / CH4 / NMHC
9/17/2010 13:05	385.77	11.36	9.47	412.0 / 11.4 / 9.5
9/17/2010 13:06	25.52	29.80	9.47	
9/17/2010 13:07	10.51	27.53	3.03	<< Zero Air Inlet
9/17/2010 13:08	8.01	2.90	0.57	THC / CH4 / NMHC
9/17/2010 13:09	583.41	5.56	2.46	9.26 / 15.21 / 1.8
9/17/2010 13:10	1021.22	50.76	5.49	<< 1017 Propane Inlet
9/17/2010 13:11	1021.22	36.49	7.58	THC / CH4 / NMHC
				1021.2 / 43.6 / 5.5

Run 2 Average Concentration	Inlet THC ppm	Outlet NMHC ppm
	1580.8	27.7

Exteria Building Products
Miami, Florida
Coating Line No. 2 IN OUT **Run 3**
RTO Destruction Efficiency Test

Date & Time	THC	CH4	NMHC	
9/17/2010 13:34	1163.82	51.26	6.25	<< Start Run 3
9/17/2010 13:35	1348.94	109.72	15.34	
9/17/2010 13:36	1476.53	7.20	23.11	
9/17/2010 13:37	1541.58	1.89	21.21	
9/17/2010 13:38	1636.65	1.64	6.63	
9/17/2010 13:39	1659.16	25.38	10.23	
9/17/2010 13:40	1704.19	24.62	28.79	
9/17/2010 13:41	1764.24	0.88	19.13	
9/17/2010 13:42	1566.60	1.39	10.80	
9/17/2010 13:43	1629.14	1.26	10.42	
9/17/2010 13:44	1634.14	0.25	16.29	
9/17/2010 13:45	1694.19	0.51	23.86	
9/17/2010 13:46	1706.70	1.01	6.06	
9/17/2010 13:47	1706.70	1.39	5.87	
9/17/2010 13:48	1691.68	1.39	40.91	
9/17/2010 13:49	1721.71	0.13	39.39	
9/17/2010 13:50	1731.71	0.63	10.23	
9/17/2010 13:51	1781.75	1.01	5.87	
9/17/2010 13:52	1726.71	0.38	8.71	
9/17/2010 13:53	1806.77	0.13	18.37	
9/17/2010 13:54	1811.77	0.25	8.71	
9/17/2010 13:55	1724.21	0.63	3.98	
9/17/2010 13:56	1854.30	1.14	49.24	
9/17/2010 13:57	1789.25	0.13	99.24	
9/17/2010 13:58	1779.25	0.13	10.80	
9/17/2010 13:59	1739.22	0.63	4.92	
9/17/2010 14:00	1784.25	0.63	4.74	
9/17/2010 14:01	1746.72	0.13	12.50	
9/17/2010 14:02	1751.73	0.13	10.61	
9/17/2010 14:03	1769.24	0.25	4.17	
9/17/2010 14:04	1796.76	0.51	21.97	
9/17/2010 14:05	1814.27	0.25	137.69	
9/17/2010 14:06	1894.33	0.00	14.58	
9/17/2010 14:07	1829.28	0.25	5.87	
9/17/2010 14:08	1761.73	0.51	3.98	
9/17/2010 14:09	1754.23	0.13	5.68	
9/17/2010 14:10	1751.73	0.00	7.39	
9/17/2010 14:11	1774.24	0.13	3.98	
9/17/2010 14:12	1749.22	0.38	2.65	
9/17/2010 14:13	1761.73	0.63	108.90	
9/17/2010 14:14	1726.71	0.51	41.67	
9/17/2010 14:15	1794.26	0.13	6.63	
9/17/2010 14:16	1824.28	0.63	3.60	
9/17/2010 14:17	1771.74	0.63	3.41	
9/17/2010 14:18	1806.77	0.63	7.20	
9/17/2010 14:19	1836.79	0.63	3.41	
9/17/2010 14:20	1821.78	0.63	2.84	

	IN		OUT	
9/17/2010 14:21	1856.80	0.63	67.61	
9/17/2010 14:22	1766.74	0.63	60.04	
9/17/2010 14:23	1816.77	0.63	8.14	
9/17/2010 14:24	1744.22	0.63	4.55	
9/17/2010 14:25	1781.75	0.63	2.65	
9/17/2010 14:26	1764.24	0.63	6.25	
9/17/2010 14:27	1776.74	0.63	4.17	
9/17/2010 14:28	1686.68	0.63	3.03	
9/17/2010 14:29	1681.68	0.63	32.39	
9/17/2010 14:30	1816.77	0.63	61.55	
9/17/2010 14:31	1756.73	0.63	8.52	
9/17/2010 14:32	1791.75	0.63	4.17	
9/17/2010 14:33	1709.20	0.63	2.84	
9/17/2010 14:34	1759.23	0.63	10.04	<< End Run 3
9/17/2010 14:35	1751.73	0.63	8.71	
9/17/2010 14:36	1471.53	0.63	3.22	
9/17/2010 14:37	1123.79	0.63	1.14	
9/17/2010 14:38	826.08	0.76	0.57	
9/17/2010 14:39	703.49	0.63	0.00	<< Zero Air Outlet
9/17/2010 14:40	613.43	0.76	0.00	THC / CH4 / NMHC
9/17/2010 14:41	550.89	2.15	0.00	658.46 / 0.69 / 0.0
9/17/2010 14:42	500.85	8.84	3.22	
9/17/2010 14:43	493.35	11.74	7.96	
9/17/2010 14:44	438.31	11.87	9.47	<< 9.97 Propane Outlet
9/17/2010 14:45	410.79	11.49	9.47	THC / CH4 / NMHC
9/17/2010 14:46	20.51	7.32	9.47	424.5 / 11.7 / 9.5
9/17/2010 14:47	10.51	2.40	2.46	
9/17/2010 14:48	3.00	2.27	2.84	<< Zero Air Inlet
9/17/2010 14:49	-7.01	0.13	0.57	THC / CH4 / NMHC
9/17/2010 14:50	1033.72	0.13	0.57	-2.00 / 1.20 / 1.7
9/17/2010 14:51	1028.72	0.13	0.57	<< 1017 Propane Inlet
				THC / CH4 / NMHC
				1031.2 / 0.1 / 0.6

Run 3 Average Concentration	Inlet THC ppm	Outlet NMHC ppm
	1731.5	19.6

Analyzer Calibration Calculations Summary
Method 25A

EPA Protocol Gas Analyzer Calibration Data

Instrument Range Setting {ppmv} 0 to 500

Cylinder ID #	Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	3% max Drift (% of span)(1)
55-110554182-1	Zero	0.00	R1-Pre	9/17/2010 9:04	0.00	
CC-56671	Methane	10.6	R1-Pre	9/17/2010 8:58	10.73	
CC-165357	Methane	52.3	R1-Pre	9/17/2010 8:53	52.55	
CC-56231	Methane	103.8	R1-Pre	9/17/2010 8:48	101.26	
55-110554182-1	Zero	0	R1-Pre	9/17/2010 9:04	0.00	
55-110554182-1	Zero	0.00	R1-Post	9/17/2010 11:11	0.00	0.00
CC-56671	Methane	10.6	R1-Pre	9/17/2010 8:53	10.73	
CC-56671	Methane	10.6	R1-Post	9/17/2010 11:19	11.24	0.49
55-110554182-1	Zero	0.00	R2-Pre	9/17/2010 11:11	0.00	
55-110554182-1	Zero	0.00	R2-Post	9/17/2010 12:59	0.13	0.12
CC-56671	Methane	10.6	R2-Pre	9/17/2010 11:19	11.24	
CC-56671	Methane	10.6	R2-Post	9/17/2010 13:03	11.36	0.61
55-110554182-1	Zero	0.00	R3-Pre	9/17/2010 12:59	0.13	
55-110554182-1	Zero	0.00	R3-Post	9/17/2010 14:39	0.69	0.67
CC-56671	Methane	10.6	R3-Pre	9/17/2010 13:03	11.36	
CC-56671	Methane	10.6	R3-Post	9/17/2010 14:44	11.68	0.43
	Total Test Period Zero and Mid-level Drift					
55-110554182-1	Zero	0.00	R1-Pre*	9/17/2010 9:04	0.00	
55-110554182-1	Zero	0.00	R3-Post	9/17/2010 14:39	0.69	0.55
CC-56671	Methane	10.6	R1-Pre*	9/17/2010 8:53	10.73	
CC-56671	Methane	10.6	R3-Post	9/17/2010 14:44	11.68	0.91

Analyzer; Themo Environmental Instruments , available ranges (0-75, 750, 7500ppm)

(1) Method 25A, Section 8.4/9.0/13.0

Span; For calculation purposes is equal to the highest (rounded-up) calibration gas used.

Method 25A, Section 7.1.2-7.1.5

Cal. Gas ppm	% of Range
10.6	2.12
52.3	10.46
103.8	20.76

Method 25A, Section 8.4

	Response	Actual
zero	0.00	0.0
Span	101.3	103.8

slope	0.976	=m
y-int	0.000	=b
R^2	1.000	
	certified conc.	=x
	predicted conc.	=Y

y=m(x)+b

51.0	predicted mid level
10.3	predicted low level

Mid gas Differences 5% max.

-2.91	mid % difference
-3.69	low % difference

Analyzer Calibration Calculations Summary
Method 25A

EPA Protocol Gas Analyzer Calibration Data **Instrument Range Setting (ppmv) 0 to 500**						
Cylinder ID #	Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	3% max Drift (% of span)(1)
55-110554182-1	Zero	0.00	R1-Pre	9/17/2010 9:04	0.00	
CC-56671	NMHC	10.0	R1-Pre	9/17/2010 8:58	9.77	
CC-165357	NMHC	49.9	R1-Pre	9/17/2010 8:53	52.27	
CC-56231	NMHC	100.5	R1-Pre	9/17/2010 8:48	101.33	
55-110554182-1	Zero	0	R1-Pre	9/17/2010 9:04	0.00	
55-110554182-1	Zero	0.00	R1-Post	9/17/2010 11:11	0.00	0.00
CC-56671	NMHC	10.0	R1-Pre	9/17/2010 8:53	9.77	
CC-56671	NMHC	10.0	R1-Post	9/17/2010 11:17	9.28	-0.49
55-110554182-1	Zero	0.00	R2-Pre	9/17/2010 11:11	0.00	
55-110554182-1	Zero	0.00	R2-Post	9/17/2010 12:59	0.00	0.00
CC-56671	NMHC	10.0	R2-Pre	9/17/2010 11:17	9.28	
CC-56671	NMHC	10.0	R2-Post	9/17/2010 13:03	9.47	-0.30
55-110554182-1	Zero	0.00	R3-Pre	9/17/2010 12:59	0.00	
55-110554182-1	Zero	0.00	R3-Post	9/17/2010 14:39	0.00	0.00
CC-56671	NMHC	10.0	R3-Pre	9/17/2010 13:03	9.47	
CC-56671	NMHC	10.0	R3-Post	9/17/2010 14:44	9.47	0.19
	Total Test Period Zero and Mid-level Drift					
55-110554182-1	Zero	0.00	R1-Pre*	9/17/2010 9:04	0.00	
55-110554182-1	Zero	0.00	R3-Post	9/17/2010 14:39	0.00	0.00
CC-56671	NMHC	10.0	R1-Pre*	9/17/2010 8:53	9.77	
CC-56671	NMHC	10.0	R3-Post	9/17/2010 14:44	9.47	-0.30

Analyzer; Themo Environmental Instruments , available ranges (0-75, 750, 7500ppm)

(1) Method 25A, Section 8.4/9.0/13.0

Span; For calculation purposes is equal to the highest (rounded-up) calibration gas used.

Method 25A, Section 7.1.2-7.1.5

Cal. Gas ppm	% of Range
10.0	1.99
49.9	9.98
100.5	20.10

Method 25A, Section 8.4

	Response	Actual
zero	0.00	0.0
Span	101.3	100.5

slope	1.008	=m
y-int	0.000	=b
R^2	1.000	
	certified conc.	=x
	predicted conc.	=Y

y=m(x)+b

50.3	predicted mid level
10.1	predicted low level

Mid gas Differences 5% max.

-3.93	mid % difference
2.83	low % difference

Analyzer Calibration Calculations Summary
Method 25A

EPA Protocol Gas Analyzer Calibration Data

Instrument Range Setting {ppmv} 0 to 10000

Cylinder ID #	Calibration Gas	Conc. (ppmv)	Run No.	Date/Time	Response through Train System Loop (ppmv)	3% max Drift (% of span)(1)
55-110554182-1	Zero	0.00	R1-Pre	9/17/2010 8:31	-2.00	
CC-92919	THC	513.4	R1-Pre	9/17/2010 8:28	513.36	
CC-251816	THC	1017.0	R1-Pre	9/17/2010 8:25	1031.22	
CC-185119	THC	2935.0	R1-Pre	9/17/2010 8:22	2936.31	
55-110554182-1	Zero	0	R1-Pre	9/17/2010 8:31	-2.00	
55-110554182-1	Zero	0.00	R1-Post	9/17/2010 11:21	5.50	0.26
CC-251816	THC	1017.0	R1-Pre	9/17/2010 8:25	1031.22	
CC-251816	THC	1017.0	R1-Post	9/17/2010 11:24	1026.22	-0.17
55-110554182-1	Zero	0.00	R2-Pre	9/17/2010 11:21	5.50	
55-110554182-1	Zero	0.00	R2-Post	9/17/2010 13:07	9.26	0.38
CC-251816	THC	1017.0	R2-Pre	9/17/2010 11:24	1026.22	
CC-251816	THC	1017.0	R2-Post	9/17/2010 13:10	1021.22	-0.34
55-110554182-1	Zero	0.00	R3-Pre	9/17/2010 13:07	9.26	
55-110554182-1	Zero	0.00	R3-Post	9/17/2010 14:48	-2.00	-0.26
CC-251816	THC	1017.0	R3-Pre	9/17/2010 13:10	1021.22	
CC-251816	THC	1017.0	R3-Post	9/17/2010 14:50	1031.22	0.17
	Total Test Period Zero and Mid-level Drift					
55-110554182-1	Zero	0.00	R1-Pre*	9/17/2010 8:31	-2.00	
55-110554182-1	Zero	0.00	R3-Post	9/17/2010 14:48	-2.00	-0.38
CC-251816	THC	1017.0	R1-Pre*	9/17/2010 8:25	1031.22	
CC-251816	THC	1017.0	R3-Post	9/17/2010 14:50	1031.22	0.00

Analyzer; JUM Model 300-1 **, available ranges (0-10, 100, 1000,10000 ppm)**

(1) Method 25A, Section 8.4/9.0/13.0

Span; For calculation purposes is equal to the highest (rounded-up) calibration gas used.

Method 25A, Section 7.1.2-7.1.5

Cal. Gas ppm	% of Range
513.4	5.13
1017.0	10.17
2935.0	29.35

Method 25A, Section 8.4

	Response	Actual
zero	-2.00	0.0
Span	2936.3	2935.0

slope	1.001	=m
y-int	-2.001	=b
R^2	1.000	
	certified conc.	=x
	predicted conc.	=Y

y=m(x)+b

1016.1	predicted mid level
512.0	predicted low level

Mid gas Differences 5% max.

-1.48	mid % difference
-0.27	low % difference

A-4

Coating Line 2 RTO
Destruction Efficiency Tests
09/17/2010

FIELD DATA SHEETS

KOOGLER AND ASSOCIATES, INC.
INSTRUMENTAL GAS SAMPLING FIELD DATA RECORD

PLANT	Exterja			DATE	9/17/10		
LOCATION	Miami, FL			EMISSION UNIT	RTO inlet + Outlet		
TEST(s)	VOC Destruction Efficiency			SYSTEM LEAK CHECK (Limit 1 inHg/2min)			
				Init. VAC inHg	10	Final VAC inHg	10
INSTRUMENT RANGE (R) (0-XXX)				Calibration Gas Certified Concentration Value			
Instrument	Available R	Selected R	Teloger Vdc	Test	Zero / Mid-Gas	Mid-Gas	High-Gas(span)
NOx (M7E)				NOx (M7E)			
SO2 (M6C)				SO2 (M6C)			
CO (M10)				CO (M10)			
THC (M25A)	0-10,000	0-10,000	10.0	THC (M25A)	Zero Air	513.4	1017/2935
NMHC	0-			NMHC	Zero Air	99.7/49.9	103.8
O2 (M3A)				O2 (M3A)			
CO2 (M3A)				CO2 (M3A)			

TIME	Action / Comment
08:14	Zero air on inlet
08:18	Zero air = 3.0
08:20	2935 prop on
08:22	2935 prop = 2955
08:24	1017 prop on
08:25	1017 prop = 1033
08:27	513.4 prop on
08:28	513.4 prop = 515
08:30	Zero air on
08:31	Zero air = 0.5
08:33	Zero air on outlet
08:38	CH_4 = 0 NMHC = 1.14
08:41	103.8 CH_4 / 100.5 NMHC on
08:47	CH_4 = 100.8 / NMHC = 101.5
08:49	52.3 CH_4 / 49.9 NMHC on
08:53	CH_4 = 51.7 / NMHC = 51.9
08:55	10.0 CH_4 / 9.97 NMHC on
08:58	CH_4 = 10.7 / NMHC = 9.8
09:00	Zero air on
09:04	CH_4 = 0.10 NMHC = 0.0
10:04	Start Run #1
11:04	End Run #1 Zero air on outlet
11:11	CH_4 = 0 / NMHC = 0
11:14	9.97 prop on
11:17	CH_4 = 11.4 / NMHC = 9.5
11:19	Zero air on inlet
11:21	THC = 8.0
11:23	1017 prop on

TIME	Action / Comment
11:24	1017 prop = 1028
11:53	Start Run #2
12:53	End Run #2 Zero air on outlet
12:58	CH_4 = 0.3 / NMHC = 0.4
13:00	9.97 prop on
13:03	CH_4 = 11.4 / NMHC = 9.5
13:05	Zero air on inlet
13:07	Zero air = 13
13:09	1017 prop on
13:10	1017 = 1033
13:34	Start Run #3
14:34	End Run #3 N_2 on outlet
14:39	CH_4 = 0.63 / NMHC = 0
14:41	9.97 prop on
14:44	CH_4 = 11.7 / NMHC = 9.5
14:45	Zero air on inlet
14:47	Zero air = 10
14:49	1017 prop on
14:51	1017 prop = 1028

98.91 avg
r3

98.39
3 r avg

Multiple Methods Data Sheet

Plant: Exteria – RTO outlet moisture
Sample Location: Miami, FL
Control Type: RTO
Sample Type: Moisture
Date: 9/17/16 | Run No.: 1
Time Start: 10:04 | Time End: 11:04
Sample Time: 5/12 | min/point 60 Total Mins.
Dry Bulb: °F | Wet Bulb: °F VP@DP:
Bar. Pres: 29.90 "Hg | Stack Pres: "Hg Ps: "H_2O
Moisture: 3 % | FDA: Gas Density Factor:
Temp: °F | Wind Direction: Wind Speed:
Weather: Scat | Thermocouple Readout: KA-9
Sample Box No.: — | Meter Box No.: KA-9
Meter Y: 0.995 @ | Delta H: Pitot Corr.:
Nozzle Diameter: — inches | Probe Length: 555 feet
Probe Heater Setting: — | Nomograph Cf: ΔH
Stack Dimensions: 42" inches
Stack Area: ft^2
Effective Stack Area: ft^2
Stack Height: 230" ft

Stack Dimensions

Umbilical: KAK-100
Thermocouple
Probe No. —
Pitot Tube: —

Material Processing Rate:
Final Gas Meter Reading: 535.548 ft^3
Initial Gas Meter Reading: 493.000 ft^3
Total Metered Gas Volume: 42.548 ft^3
Condensate Gain in Impingers: 19 mL
Weight Gain in Silica Gel: 9 g
Total Moisture Gain: 28 mL
Silica Gel Container No.: 25
Filter Number:

Leak Check - Meter Box:
Initial: 0.000 cfm @ 6 inches Hg
Final: cfm @ inches Hg

Leak Check - Pitot Tubes:
Impact 3 "H_2O for 15 sec. (Stable) Leak
Static 3 "H_2O for 15 sec. (Stable) Leak

Test Conducted By: G. Haven K Ulmer
O_2: % | CO_2: %
Stack Test Observers:

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head (H_2O)	Meter Orifice Pressure Difference (H_2O)		Stack Gas Temp (°F)	Sample Box Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (%O_2)
					Calculated	Actual						
1-1		0	493.0		1.6	1.6	—	—	57	68	2	
2		5							45	69	2	
3		10	99.8						47	70	2	
4		15							49	72	2	
5		20							50	73	2	
6		25							50	73	2	
7		30							50	74	2	
8		35							51	76	2	

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head (H_2O)	Meter Orifice Pressure Difference (H_2O)		Stack Gas Temp (°F)	Sample Box Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (%O2)
					Calculated	Actual						
9		40	21.2	1.	1.6	1.6			52	76	2	
10		45	24.4		1	1			52	77	2	
11		50			1	1			52	78	2	
12		55	31.9		1	1			52	78	2	

KOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Multiple Methods Data Sheet

Plant: Exteria RTO outlet
Sample Location: Miami, FL
Control Type: RTO
Sample Type: Moisture
Date: 9/17/10 | Run No.: 2
Time Start: 11:53 | Time End:
Sample Time: 5/12 | min/point 60 | Total Mins.
Dry Bulb: °F | Wet Bulb: °F | VP@DP:
Bar. Pres: 29.90 "Hg | Stack Pres: "Hg | Ps: "H_2O
Moisture: 3 % | FDA: | Gas Density Factor:
Temp: 88 °F | Wind Direction: | Wind Speed:
Weather: Scatt. | Thermocouple Readout: KA-9
Sample Box No.: | Meter Box No.: KA-9
Meter Y: 0.995 @ | Delta H: 1.59 | Pitot Corr.:
Nozzle Diameter: — inches | Probe Length: 5.55 feet
Probe Heater Setting: | Nomograph Cf: ΔH
Stack Dimensions: 42" inches
Stack Area: ft^2
Effective Stack Area: ft^2
Stack Height: ≥ 30' ft

Stack Dimensions

Umbilical: KW-100
Thermocouple
Probe No. —
Pitot Tube: —

Material Processing Rate:
Final Gas Meter Reading: 579.878 ft^3
Initial Gas Meter Reading: 536.000 ft^3
Total Metered Gas Volume: 43.878 ft^3
Condensate Gain in Impingers: 21 mL
Weight Gain in Silica Gel: 8 g
Total Moisture Gain: 29 mL
Silica Gel Container No.: 2
Filter Number:

Leak Check - Meter Box:
Initial 0.000 cfm @ 7 inches Hg
Final: 0.000 cfm @ 5 inches Hg

Leak Check - Pitot Tubes:
Impact 3 "H_2O for 15 sec: Stable, Leak
Static 3 "H_2O for 15 sec: Stable, Leak

Test Conducted By: G Haven K. Ulmer
O_2: % | CO_2: %
Stack Test Observers:

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head (H_2O)	Meter Orifice Pressure Difference (H_2O)		Stack Gas Temp (°F)	Sample Box Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (%O_2)
					Calculated	Actual						
1-1		0	36.0		1.6	1.6			72	73	3	
2		5	39.4						50	73	3	
3		16	43.0						52	75	3	
4		15	46.8						52	76	3	
5		20	50.4						52	76	3	
6		25							51	77	3	
7		30	57.7						51	77	3	
8		35	61.3						50	78	3	

77.3 AVG MT

ACOM ENVIRONMENTAL ASSOCIATES, INC. ENVIRONMENTAL SERVICES

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head (H_2O)	Meter Orifice Pressure Difference (H_2O)		Stack Gas Temp (°F)	Sample Box Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (%O2)
					Calculated	Actual						
1-9		1:10	565.0		1.6	1.6			50	79	3	
10		45	572.4						50	80	3	
11		50							49	80	3	
12		55							49	80	3	
		60							49	81	3	

Multiple Methods Data Sheet

Plant: Exteria RTO outlet
Sample Location: Miami, FL
Control Type: RTO
Sample Type: Moisture
Date: 9/17/10 | Run No.: 3
Time Start: 13:34 | Time End: 14:34
Sample Time: 5/12 | min/point 60 Total Mins.
Dry Bulb: °F | Wet Bulb: °F | VP@DP:
Bar. Pres: 29.90 "Hg | Stack Pres: "Hg | Ps: "H_2O
Moisture: 3 % | FDA: | Gas Density Factor:
Temp: 89 °F | Wind Direction: | Wind Speed:
Weather: sunny | Thermocouple Readout: KA-9
Sample Box No.: | Meter Box No.: ~~KA-9~~ KA-9
Meter Y: 0.995 @ | Delta H: ~~0.995~~ | Pitot Corr.: 0.84
Nozzle Diameter: — inches | Probe Length: 5'5 feet
Probe Heater Setting: | Nomograph Cf: ΔH
Stack Dimensions: 42" inches
Stack Area: ft²
Effective Stack Area: ft²
Stack Height: 130 ft

Stack Dimensions

Umbilical: KAK-100
Thermocouple
Probe No. —
Pitot Tube: —

Material Processing Rate:
Final Gas Meter Reading: 624.068 ft³
Initial Gas Meter Reading: 579.994 ft³
Total Metered Gas Volume: 44.07 ft³
Condensate Gain in Impingers: 22 mL
Weight Gain in Silica Gel: 8 g
Total Moisture Gain: 30 mL
Silica Gel Container No.: AAA
Filter Number:

Leak Check - Meter Box:
Initial: 0.000 cfm @ 7 inches Hg
Final: 0.00 cfm @ 5 inches Hg

Leak Check - Pitot Tubes:
Impact 3 "H_2O for 15 sec: Stable, Leak
Static 3 "H_2O for 15 sec: Stable, Leak

Test Conducted By: G. Haven K. Ulmer
O_2: % | CO_2: %
Stack Test Observers:

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head (H_2O)	Meter Orifice Pressure Difference (H_2O)		Stack Gas Temp (°F)	Sample Box Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading ($\%O_2$)
					Calculated	Actual						
1-1		0	79.9		1.6	1.6			72	75	3	
2		5							52	76	3	
3		10	87.5						47	76	3	
4		15	91.1						46	77	3	
5		20							48	77	3	
6		25	98.4						48	77	3	
7		30	602.0						49	78	3	
8		35	605.7						49	76	3	

77.6 AVG MT

ARCADIS ASSOCIATES INC. ENVIRONMENTAL SERVICES

Port and Traverse Point No.	Distance from Inside Stack Wall (in.)	Clock Time	Gas Meter Reading (ft^3)	Stack Velocity Head (H_2O)	Meter Orifice Pressure Difference (H_2O)		Stack Gas Temp (°F)	Sample Box Temp (°F)	Last Impinger Temp (°F)	Meter Temp (°F)	Vacuum on Sample Train ("Hg)	Oxygen Meter Reading (%O2)
					Calculated	Actual						
1-9		40	9.4		1.6	1.6			48	78	3	
10		45	12.1						48	79	3	
11		50							49	80	3	
12		55	620.4							80	3	

KOOGLER & ASSOCIATES, LLC
ENVIRONMENTAL SERVICES

KOOGLER & ASSOCIATES, INC.

Traverse Data Sheet and Cyclonic Flow Check

Source/Plant Identification: Exteria

Location/Site: Miami, FL

Date: 9/17/10

Stack Unit: RTO outlet

RTO outlet

KA-SSIII PT
FARGO TC

Stack Diameter: ____ Ft. 42 inches

Pitot Corr. Factor: ____ (Default=0.84)

Barometric Pressure: 29.90 inches Hg

Technician ID: G.H
K.U

Pitot Tube Leak Check: Stable @ 3"

Point Number		Distance From Stack	Cyclonic Check Null Angle	Time: Run #1		Time: Run #2		Time: Run #3		Time:	
				Stack Pressure: -0.25		Stack Pressure: -0.25		Stack Pressure: -0.25		Stack Pressure:	
				Traverse No.		Traverse No.		Traverse No.		Traverse No.	
Total	per port	Wall	Verticle	△ P (in Hg)	Temp. F	△ P (in Hg)	Temp. F	△ P (in Hg)	Temp. F	△ P (in Hg)	Temp. F
1	1			0.22	209	0.19	211	0.34	213		
2	2			0.24	219	0.24	215	0.34	191		
3	3			0.28	237	0.27	218	0.33	174		
4	4			0.32	248	0.28	221	0.31	167		
5	5			0.40	250	0.38	229	0.36	158		
6	6			0.42	242	0.41	240	0.37	154		
7	1			0.65	205	0.59	225	0.55	150		
8	2			0.76	193	0.74	214	0.67	149		
9	3			0.74	174	0.87	210	0.75	149		
10	4			0.73	173	0.82	193	0.72	150		
11	5			0.45	172	0.43	185	0.59	152		
12	6			0.29	169	0.40	176	0.52	153		
13	1			0.35	220	0.35	166	0.20	231		
14	2			0.36	231	0.39	166	0.19	205		
15	3			0.38	233	0.31	178	0.21	207		
16	4			0.40	188	0.32	183	0.22	197		
17	5			0.35	183	0.38	188	0.24	195		
18	6			0.55	168	0.27	192	0.29	190		
19	1			0.72	161	0.55	203	0.49	195		
20	2			0.77	174	0.85	220	0.49	157		
21	3			0.78	151	1.0	207	0.62	159		
22	4			0.68	149	1.1	211	0.57	152		
23	5			0.73	148	0.92	205	0.50	154		
24	6			0.55	148	0.88	216	0.34	162		
				T_w °F:	—	T_w °F:	—	T_w °F:	—	T_w °F:	
				CO_2 %:	0.0	CO_2 %:	0.0	CO_2 %:	0.0	CO_2 %:	
				O_2 %:	20.8	O_2 %:	20.8	O_2 %:	20.8	O_2 %:	

T_w = Wet bulb temp.

KOOGLER & ASSOCIATES, INC.
Traverse Data Sheet and Cyclonic Flow Check

Source/Plant Identification: Exteria Date: 9/17/10

Location/Site: Miami, FL Stack Unit: RTO inlet

RTO Inlet

KA-55III
KAK-60

Stack Diameter: _____ Ft. 44 inches

Pitot Corr. Factor: 0.84 (Default=0.84)

Barometric Pressure: 29.90 inches Hg

Technician ID: GH
RJ

Pitot Tube Leak Check: Stable @ 3"

Point Number		Distance From Stack	Cyclonic Check Null Angle	Time: Run #1		Time: Run #2		Time: Run #3		Time:	
				Stack Pressure: -3.9		Stack Pressure: -3.9		Stack Pressure: -3.9		Stack Pressure:	
Total	per port	Wall	Verticle	Traverse No.		Traverse No.		Traverse No.		Traverse No.	
				△ P (in Hg)	Temp. F	△ P (in Hg)	Temp. F	△ P (in Hg)	Temp. F	△ P (in Hg)	Temp. F
1	1			0.25	93	0.21	95	0.31	96		
2	2			0.32	93	0.25	95	0.30	96		
3	3			0.32	93	0.30	95	0.32	96		
4	4			0.35	93	0.35	95	0.33	96		
5	5			0.37	93	0.36	95	0.33	96		
6	6			0.39	93	0.38	95	0.35	96		
7	1			0.37	93	0.37	95	0.35	96		
8	2			0.36	93	0.36	95	0.35	96		
9	3			0.36	93	0.31	95	0.33	96		
10	4			0.37	93	0.28	95	0.26	96		
11	5			0.32	93	0.24	95	0.22	96		
12	6			0.31	93	0.23	95	0.22	96		
13	1			0.30	93	0.26	95	0.27	96		
14	2			0.34	93	0.29	95	0.32	96		
15	3			0.35	93	0.33	95	0.34	96		
16	4			0.37	93	0.36	95	0.36	96		
17	5			0.38	93	0.38	95	0.36	96		
18	6			0.40	93	0.40	95	0.37	96		
19	1			0.38	93	0.37	95	0.36	96		
20	2			0.35	93	0.36	95	0.35	96		
21	3			0.35	93	0.35	95	0.30	96		
22	4			0.25	93	0.31	95	0.30	96		
23	5			0.25	93	0.25	95	0.23	96		
24	6			0.24	93	0.19	95	0.22	96		
				T_w °F:	80.0	T_w °F:	80.0	T_w °F:	80.0	T_w °F:	
				CO_2 %:	0.0	CO_2 %:	0.0	CO_2 %:	0.0	CO_2 %:	
				O_2 %:	20.8	O_2 %:	20.8	O_2 %:	20.8	O_2 %:	

T_w = Wet bulb temp.

B-1

Plant Operating Data

PLANT OPERATING LOGS AND RTO TEMPERATURES

Nailite International, Inc
Facility ID: 0250407

2010 Destruction Efficiency Testing Matrix
Friday 09/17/2010-Destruction Testing

**********LINE 2**********

Trial 1 Line 2*		Color Code	Panel	Tentative start time
Booth 1	tbd	Cape Cod Gray	scrap	8:00 a.m.-9:10 a.m.

Trial 2 Line 2*		Color Code	Panel	Tentative start time
Booth 1	tbd	Cape Cod Gray	scrap	9:40 a.m.-10:50 a.m.

Trial 3 Line 2*		Color Code	Panel	Tentative start time
Booth 1	tbd	Cape Cod Gray	scrap	11:20 a.m.12:30 a.m.

***applied at very low mileage**

scrap material stored in Gravity rack 18

Nailite International, Inc
Facility ID: 0250407

2010 Capture and Destruction Testing Notes

1) Each trial will run for approximately 1 hour and 10 minutes
2) **(3) Destruction effeciency test trials will be conducted on Friday 09/17/2010 -L1- lowest temp/worst case scenario**
3) The paint line must not stop at any point during the timed trial
4) Any reduction or modifications to the coatings must be recorded
5) Paintline personnel must be ready at the appointed trial times
6) Breaks will be given in between trial runs but no interuptions will be permitted during the trials.
7) Coating usage measurements must be made in the paint kitchen just before the test begins and just after the test finishes.
8) Any adjustments made to the coating must be recorded
9) **No painting on Line 1 during day shift on Friday 09/17/2010**
10) **Fans for both lines must be left on at all times-even when only 1 line is being tested**
11) Scrap coatings may be used for destruction trials on Tuesday 09/17/2010

Test 1

Gallons of Booth 1 paint used**	21.00
Gallons of toluene used	9.00
Gallons of hisol used	0.00
Gallons of acetone used	0.00
Total fluid applied	30.00
average RTO combustion chamber temperature	1529

Test 2

Gallons of Booth 1 paint used**	16.90
Gallons of toluene used	9.10
Gallons of hisol used	0.00
Gallons of acetone used	0.00
Total fluid applied	26.00
average RTO combustion chamber temperature	1544

Test 3

Gallons of Booth 1 paint used**	22.62
Gallons of toluene used	16.38
Gallons of hisol used	0.00
Gallons of acetone used	0.00
Total fluid applied	39.00
average RTO combustion chamber temperature	1560

** Cape Cod Gray used-see MSDS

Nailite International, Inc
Facility ID: 0250407

2010 Destruction Effeciency Testing

Friday 09/17/2010
Trial 1
Paint Line 2
Product Name: Cape Cod Gray

Booth #	1
Nailite Coating Name*	Cape Cod Gray
Nailite Color Number	tbd
Manufacturer	Strathmore
Begin Trial Time	10:05
End Trial Time	11:05
Begin Trial Volume (Reduced Paint-gal)	54
End Trial Volume (Reduced Paint-gal)	24
Volume of Reduced Paint Used-gal	30
Cut Ratio (expressed as % solvent)	30
Cut Ratio (expressed as % paint)	70
% Toluene used as % of total reducer	100
% Hisol used as % of total reducer	0
% Acetone used as % of total reducer	0
Volume of Paint used (nonreduced)	21
Volume of Reducer-Toluene	9
Volume of Reducer-Hisol Used	0
Volume of Reducer-Acetone	0

*See attached MSDS for coating information, VOC composition etc.

PAINT LINE 2 SUMMARY PAINT LINE 2 SUMMARY PAINT LINE 2 SUMMARY

Gallons of Booth 1 paint used**	21.00
Gallons of toluene used	9.00
Gallons of hisol used	0.00
Gallons of acetone used	0.00
Total fluid applied	30.00

Time	eZtrend QXe - gas on/off	eZtrend QXe - p2 run mode	eZtrend QXe - p1 ave. comb temp.
Fri Sep 17 2010 10:05:07.5000	-0.48	2.0864	1544
Fri Sep 17 2010 10:05:15.0000	-0.48	2.0857	1544
Fri Sep 17 2010 10:05:22.5000	-0.48	2.0861	1544
Fri Sep 17 2010 10:05:37.5000	-0.48	2.0864	1544
Fri Sep 17 2010 10:05:45.0000	-0.48	2.0864	1544
Fri Sep 17 2010 10:05:52.5000	-0.48	2.0861	1544
Fri Sep 17 2010 10:06:07.5000	-0.48	2.0861	1544
Fri Sep 17 2010 10:06:15.0000	-0.48	2.0861	1544
Fri Sep 17 2010 10:06:22.5000	-0.48	2.0857	1543
Fri Sep 17 2010 10:06:37.5000	-0.48	2.0864	1543
Fri Sep 17 2010 10:06:45.0000	-0.48	2.0867	1543
Fri Sep 17 2010 10:06:52.5000	-0.48	2.0864	1543
Fri Sep 17 2010 10:07:07.5000	-0.48	2.0851	1543
Fri Sep 17 2010 10:07:15.0000	-0.48	2.0861	1543
Fri Sep 17 2010 10:07:22.5000	-0.48	2.0861	1543
Fri Sep 17 2010 10:07:37.5000	-0.48	2.0861	1543
Fri Sep 17 2010 10:07:45.0000	-0.48	2.0864	1543
Fri Sep 17 2010 10:07:52.5000	-0.48	2.0864	1543
Fri Sep 17 2010 10:08:07.5000	-0.48	2.0861	1543
Fri Sep 17 2010 10:08:15.0000	-0.48	2.0861	1543
Fri Sep 17 2010 10:08:22.5000	-0.48	2.0857	1544
Fri Sep 17 2010 10:08:37.5000	-0.48	2.0861	1544
Fri Sep 17 2010 10:08:45.0000	-0.48	2.0861	1544
Fri Sep 17 2010 10:08:52.5000	-0.48	2.0861	1544
Fri Sep 17 2010 10:09:07.5000	-0.48	2.0864	1544
Fri Sep 17 2010 10:09:15.0000	-0.48	2.0857	1544
Fri Sep 17 2010 10:09:22.5000	5.006	2.0864	1543
Fri Sep 17 2010 10:09:37.5000	-0.48	2.0861	1543
Fri Sep 17 2010 10:09:45.0000	-0.48	2.0857	1543
Fri Sep 17 2010 10:09:52.5000	-0.48	2.0861	1543
Fri Sep 17 2010 10:10:07.5000	-0.48	2.0867	1543
Fri Sep 17 2010 10:10:15.0000	-0.48	2.0847	1543
Fri Sep 17 2010 10:10:22.5000	-0.48	2.0864	1542
Fri Sep 17 2010 10:10:37.5000	-0.48	2.0861	1542
Fri Sep 17 2010 10:10:45.0000	-0.48	2.0861	1542
Fri Sep 17 2010 10:10:52.5000	-0.48	2.0861	1542
Fri Sep 17 2010 10:11:07.5000	-0.48	2.0861	1542
Fri Sep 17 2010 10:11:15.0000	-0.48	2.0857	1542
Fri Sep 17 2010 10:11:22.5000	-0.48	2.0864	1541
Fri Sep 17 2010 10:11:37.5000	-0.48	2.0864	1541
Fri Sep 17 2010 10:11:45.0000	-0.48	2.0857	1541
Fri Sep 17 2010 10:11:52.5000	-0.48	2.0864	1541
Fri Sep 17 2010 10:12:07.5000	-0.48	2.0861	1541
Fri Sep 17 2010 10:12:15.0000	-0.48	2.0851	1541
Fri Sep 17 2010 10:12:22.5000	-0.48	2.0864	1541
Fri Sep 17 2010 10:12:37.5000	-0.48	2.0861	1541
Fri Sep 17 2010 10:12:45.0000	-0.48	2.0861	1541
Fri Sep 17 2010 10:12:52.5000	-0.48	2.0864	1541
Fri Sep 17 2010 10:13:07.5000	-0.48	2.0864	1541
Fri Sep 17 2010 10:13:15.0000	-0.48	2.0857	1541
Fri Sep 17 2010 10:13:22.5000	-0.48	2.0867	1540
Fri Sep 17 2010 10:13:37.5000	-0.48	2.0857	1540
Fri Sep 17 2010 10:13:45.0000	-0.48	2.0861	1540
Fri Sep 17 2010 10:13:52.5000	-0.48	2.0861	1540
Fri Sep 17 2010 10:14:07.5000	-0.48	2.0857	1540
Fri Sep 17 2010 10:14:15.0000	-0.48	2.0861	1540
Fri Sep 17 2010 10:14:22.5000	-0.48	2.0851	1537
Fri Sep 17 2010 10:14:37.5000	-0.48	2.0857	1537

Fri Sep 17 2010 10:14:45.0000	-0.48	2.0857	1537
Fri Sep 17 2010 10:14:52.5000	-0.48	2.0867	1537
Fri Sep 17 2010 10:15:07.5000	-0.48	2.0861	1537
Fri Sep 17 2010 10:15:15.0000	-0.48	2.0847	1537
Fri Sep 17 2010 10:15:22.5000	-0.48	2.0861	1536
Fri Sep 17 2010 10:15:37.5000	-0.48	2.0861	1536
Fri Sep 17 2010 10:15:45.0000	-0.48	2.0857	1536
Fri Sep 17 2010 10:15:52.5000	-0.48	2.0864	1536
Fri Sep 17 2010 10:16:07.5000	-0.48	2.0861	1536
Fri Sep 17 2010 10:16:15.0000	-0.48	2.0861	1536
Fri Sep 17 2010 10:16:22.5000	-0.48	2.0861	1536
Fri Sep 17 2010 10:16:37.5000	-0.48	2.0874	1536
Fri Sep 17 2010 10:16:45.0000	-0.48	2.0861	1536
Fri Sep 17 2010 10:16:52.5000	-0.48	2.0847	1536
Fri Sep 17 2010 10:17:07.5000	-0.48	2.0867	1536
Fri Sep 17 2010 10:17:15.0000	-0.48	2.0864	1536
Fri Sep 17 2010 10:17:22.5000	-0.48	2.0867	1535
Fri Sep 17 2010 10:17:37.5000	5.006	2.0864	1535
Fri Sep 17 2010 10:17:45.0000	-0.48	2.0851	1535
Fri Sep 17 2010 10:17:52.5000	-0.48	2.0851	1535
Fri Sep 17 2010 10:18:07.5000	-0.48	2.0867	1535
Fri Sep 17 2010 10:18:15.0000	-0.48	2.0867	1535
Fri Sep 17 2010 10:18:22.5000	-0.48	2.0864	1533
Fri Sep 17 2010 10:18:37.5000	-0.48	2.0857	1533
Fri Sep 17 2010 10:18:45.0000	-0.48	2.0847	1533
Fri Sep 17 2010 10:18:52.5000	-0.48	2.0861	1533
Fri Sep 17 2010 10:19:07.5000	-0.48	2.0864	1533
Fri Sep 17 2010 10:19:15.0000	-0.48	2.0857	1533
Fri Sep 17 2010 10:19:22.5000	-0.48	2.0861	1533
Fri Sep 17 2010 10:19:37.5000	-0.48	2.0864	1533
Fri Sep 17 2010 10:19:45.0000	-0.48	2.0857	1533
Fri Sep 17 2010 10:19:52.5000	-0.48	2.0861	1533
Fri Sep 17 2010 10:20:07.5000	-0.48	2.0861	1533
Fri Sep 17 2010 10:20:15.0000	-0.48	2.0864	1533
Fri Sep 17 2010 10:20:22.5000	-0.48	2.0861	1533
Fri Sep 17 2010 10:20:37.5000	-0.48	2.0857	1533
Fri Sep 17 2010 10:20:45.0000	-0.48	2.0857	1533
Fri Sep 17 2010 10:20:52.5000	-0.48	2.0851	1533
Fri Sep 17 2010 10:21:07.5000	-0.48	2.0864	1533
Fri Sep 17 2010 10:21:15.0000	-0.48	2.0861	1533
Fri Sep 17 2010 10:21:22.5000	-0.48	2.0857	1533
Fri Sep 17 2010 10:21:37.5000	-0.48	2.0857	1533
Fri Sep 17 2010 10:21:45.0000	-0.48	2.0847	1533
Fri Sep 17 2010 10:21:52.5000	-0.48	2.0867	1533
Fri Sep 17 2010 10:22:07.5000	-0.48	2.0851	1533
Fri Sep 17 2010 10:22:15.0000	-0.48	2.0861	1533
Fri Sep 17 2010 10:22:22.5000	-0.48	2.0861	1531
Fri Sep 17 2010 10:22:37.5000	-0.48	2.0861	1531
Fri Sep 17 2010 10:22:45.0000	-0.48	2.0851	1531
Fri Sep 17 2010 10:22:52.5000	-0.48	2.0864	1531
Fri Sep 17 2010 10:23:07.5000	-0.48	2.0864	1531
Fri Sep 17 2010 10:23:15.0000	-0.48	2.0864	1531
Fri Sep 17 2010 10:23:22.5000	-0.48	2.0861	1530
Fri Sep 17 2010 10:23:37.5000	-0.48	2.0864	1530
Fri Sep 17 2010 10:23:45.0000	-0.48	2.0861	1530
Fri Sep 17 2010 10:23:52.5000	-0.48	2.0864	1530
Fri Sep 17 2010 10:24:07.5000	-0.48	2.0861	1530
Fri Sep 17 2010 10:24:15.0000	-0.48	2.0851	1530
Fri Sep 17 2010 10:24:22.5000	-0.48	2.0857	1530

Fri Sep 17 2010 10:24:37.5000	-0.48	2.0851	1530
Fri Sep 17 2010 10:24:45.0000	-0.48	2.0874	1530
Fri Sep 17 2010 10:24:52.5000	-0.48	2.0864	1530
Fri Sep 17 2010 10:25:07.5000	-0.48	2.0861	1530
Fri Sep 17 2010 10:25:15.0000	-0.48	2.0851	1530
Fri Sep 17 2010 10:25:22.5000	-0.48	2.0857	1530
Fri Sep 17 2010 10:25:37.5000	-0.48	2.0874	1530
Fri Sep 17 2010 10:25:45.0000	-0.48	2.0867	1530
Fri Sep 17 2010 10:25:52.5000	-0.48	2.0851	1530
Fri Sep 17 2010 10:26:07.5000	-0.48	2.0851	1530
Fri Sep 17 2010 10:26:15.0000	-0.48	2.0857	1530
Fri Sep 17 2010 10:26:22.5000	-0.48	2.0861	1528
Fri Sep 17 2010 10:26:37.5000	-0.48	2.0867	1528
Fri Sep 17 2010 10:26:45.0000	-0.48	2.0861	1528
Fri Sep 17 2010 10:26:52.5000	-0.48	2.0877	1528
Fri Sep 17 2010 10:27:07.5000	-0.48	2.0881	1528
Fri Sep 17 2010 10:27:15.0000	-0.48	2.0857	1528
Fri Sep 17 2010 10:27:22.5000	-0.48	2.0844	1528
Fri Sep 17 2010 10:27:37.5000	-0.48	2.0874	1528
Fri Sep 17 2010 10:27:45.0000	-0.48	2.0861	1528
Fri Sep 17 2010 10:27:52.5000	-0.48	2.0861	1528
Fri Sep 17 2010 10:28:07.5000	-0.48	2.0857	1528
Fri Sep 17 2010 10:28:15.0000	-0.48	2.0867	1528
Fri Sep 17 2010 10:28:22.5000	-0.48	2.0851	1529
Fri Sep 17 2010 10:28:37.5000	-0.48	2.0861	1529
Fri Sep 17 2010 10:28:45.0000	-0.48	2.0841	1529
Fri Sep 17 2010 10:28:52.5000	-0.48	2.0877	1529
Fri Sep 17 2010 10:29:07.5000	-0.48	2.0861	1529
Fri Sep 17 2010 10:29:15.0000	-0.48	2.0847	1529
Fri Sep 17 2010 10:29:22.5000	-0.48	2.0864	1529
Fri Sep 17 2010 10:29:37.5000	-0.48	2.0857	1529
Fri Sep 17 2010 10:29:45.0000	-0.48	2.0861	1529
Fri Sep 17 2010 10:29:52.5000	-0.48	2.0861	1529
Fri Sep 17 2010 10:30:07.5000	-0.48	2.0867	1529
Fri Sep 17 2010 10:30:15.0000	-0.48	2.0857	1529
Fri Sep 17 2010 10:30:22.5000	-0.48	2.0861	1527
Fri Sep 17 2010 10:30:37.5000	-0.48	2.0864	1527
Fri Sep 17 2010 10:30:45.0000	-0.48	2.0851	1527
Fri Sep 17 2010 10:30:52.5000	-0.48	2.0864	1527
Fri Sep 17 2010 10:31:07.5000	-0.48	2.0867	1527
Fri Sep 17 2010 10:31:15.0000	-0.48	2.0861	1527
Fri Sep 17 2010 10:31:22.5000	-0.48	2.0864	1526
Fri Sep 17 2010 10:31:37.5000	-0.48	2.0857	1526
Fri Sep 17 2010 10:31:45.0000	-0.48	2.0874	1526
Fri Sep 17 2010 10:31:52.5000	-0.48	2.0864	1526
Fri Sep 17 2010 10:32:07.5000	-0.48	2.0857	1526
Fri Sep 17 2010 10:32:15.0000	-0.48	2.0867	1526
Fri Sep 17 2010 10:32:22.5000	-0.48	2.0857	1527
Fri Sep 17 2010 10:32:37.5000	-0.48	2.0867	1527
Fri Sep 17 2010 10:32:45.0000	-0.48	2.0864	1527
Fri Sep 17 2010 10:32:52.5000	-0.48	2.0861	1527
Fri Sep 17 2010 10:33:07.5000	-0.48	2.0857	1527
Fri Sep 17 2010 10:33:15.0000	-0.48	2.0857	1527
Fri Sep 17 2010 10:33:22.5000	5.006	2.0861	1527
Fri Sep 17 2010 10:33:37.5000	-0.48	2.0851	1527
Fri Sep 17 2010 10:33:45.0000	-0.48	2.0864	1527
Fri Sep 17 2010 10:33:52.5000	-0.48	2.0857	1527
Fri Sep 17 2010 10:34:07.5000	-0.48	2.0861	1527
Fri Sep 17 2010 10:34:15.0000	-0.48	2.0857	1527

Fri Sep 17 2010 10:34:22.5000	-0.48	2.0861	1526
Fri Sep 17 2010 10:34:37.5000	-0.48	2.0861	1526
Fri Sep 17 2010 10:34:45.0000	-0.48	2.0861	1526
Fri Sep 17 2010 10:34:52.5000	-0.48	2.0857	1526
Fri Sep 17 2010 10:35:07.5000	-0.48	2.0857	1526
Fri Sep 17 2010 10:35:15.0000	-0.48	2.0864	1526
Fri Sep 17 2010 10:35:22.5000	-0.48	2.0857	1525
Fri Sep 17 2010 10:35:37.5000	-0.48	2.0864	1525
Fri Sep 17 2010 10:35:45.0000	-0.48	2.0864	1525
Fri Sep 17 2010 10:35:52.5000	-0.48	2.0864	1525
Fri Sep 17 2010 10:36:07.5000	-0.48	2.0851	1525
Fri Sep 17 2010 10:36:15.0000	-0.48	2.0867	1525
Fri Sep 17 2010 10:36:22.5000	-0.48	2.0861	1526
Fri Sep 17 2010 10:36:37.5000	-0.48	2.0867	1526
Fri Sep 17 2010 10:36:45.0000	-0.48	2.0851	1526
Fri Sep 17 2010 10:36:52.5000	-0.48	2.0861	1526
Fri Sep 17 2010 10:37:07.5000	-0.48	2.0874	1526
Fri Sep 17 2010 10:37:15.0000	-0.48	2.0857	1526
Fri Sep 17 2010 10:37:22.5000	-0.48	2.0847	1527
Fri Sep 17 2010 10:37:37.5000	-0.48	2.0847	1527
Fri Sep 17 2010 10:37:45.0000	-0.48	2.0847	1527
Fri Sep 17 2010 10:37:52.5000	-0.48	2.0844	1527
Fri Sep 17 2010 10:38:07.5000	5.005	2.0851	1527
Fri Sep 17 2010 10:38:15.0000	-0.48	2.0851	1527
Fri Sep 17 2010 10:38:22.5000	-0.48	2.0861	1525
Fri Sep 17 2010 10:38:37.5000	-0.48	2.0857	1525
Fri Sep 17 2010 10:38:45.0000	-0.48	2.0864	1525
Fri Sep 17 2010 10:38:52.5000	-0.48	2.0851	1525
Fri Sep 17 2010 10:39:07.5000	-0.48	2.0861	1525
Fri Sep 17 2010 10:39:15.0000	-0.48	2.0864	1525
Fri Sep 17 2010 10:39:22.5000	-0.48	2.0864	1525
Fri Sep 17 2010 10:39:37.5000	-0.48	2.0877	1525
Fri Sep 17 2010 10:39:45.0000	-0.48	2.0851	1525
Fri Sep 17 2010 10:39:52.5000	-0.48	2.0861	1525
Fri Sep 17 2010 10:40:07.5000	-0.48	2.0874	1525
Fri Sep 17 2010 10:40:15.0000	-0.48	2.0857	1525
Fri Sep 17 2010 10:40:22.5000	-0.48	2.0844	1525
Fri Sep 17 2010 10:40:37.5000	-0.48	2.0867	1525
Fri Sep 17 2010 10:40:45.0000	-0.48	2.0857	1525
Fri Sep 17 2010 10:40:52.5000	-0.48	2.0851	1525
Fri Sep 17 2010 10:41:07.5000	-0.48	2.0861	1525
Fri Sep 17 2010 10:41:15.0000	-0.48	2.0851	1525
Fri Sep 17 2010 10:41:22.5000	5.005	2.0864	1525
Fri Sep 17 2010 10:41:37.5000	-0.48	2.0861	1525
Fri Sep 17 2010 10:41:45.0000	-0.48	2.0857	1525
Fri Sep 17 2010 10:41:52.5000	-0.48	2.0877	1525
Fri Sep 17 2010 10:42:07.5000	5.005	2.0857	1525
Fri Sep 17 2010 10:42:15.0000	-0.48	2.0877	1525
Fri Sep 17 2010 10:42:22.5000	-0.48	2.0867	1524
Fri Sep 17 2010 10:42:37.5000	-0.48	2.0867	1524
Fri Sep 17 2010 10:42:45.0000	-0.48	2.0861	1524
Fri Sep 17 2010 10:42:52.5000	-0.48	2.0861	1524
Fri Sep 17 2010 10:43:07.5000	-0.48	2.0851	1524
Fri Sep 17 2010 10:43:15.0000	-0.48	2.0851	1524
Fri Sep 17 2010 10:43:22.5000	-0.48	2.0867	1524
Fri Sep 17 2010 10:43:37.5000	-0.48	2.0867	1524
Fri Sep 17 2010 10:43:45.0000	-0.48	2.0857	1524
Fri Sep 17 2010 10:43:52.5000	-0.48	2.0847	1524
Fri Sep 17 2010 10:44:07.5000	-0.48	2.0881	1524

Fri Sep 17 2010 10:44:15.0000	-0.48	2.0861	1524
Fri Sep 17 2010 10:44:22.5000	-0.48	2.0867	1525
Fri Sep 17 2010 10:44:37.5000	-0.48	2.0877	1525
Fri Sep 17 2010 10:44:45.0000	-0.48	2.0841	1525
Fri Sep 17 2010 10:44:52.5000	-0.48	2.0847	1525
Fri Sep 17 2010 10:45:07.5000	-0.48	2.0891	1525
Fri Sep 17 2010 10:45:15.0000	-0.48	2.0877	1525
Fri Sep 17 2010 10:45:22.5000	-0.48	2.0827	1526
Fri Sep 17 2010 10:45:37.5000	-0.48	2.0877	1526
Fri Sep 17 2010 10:45:45.0000	-0.48	2.0894	1526
Fri Sep 17 2010 10:45:52.5000	-0.48	2.0851	1526
Fri Sep 17 2010 10:46:07.5000	-0.48	2.0837	1526
Fri Sep 17 2010 10:46:15.0000	5.005	2.0837	1526
Fri Sep 17 2010 10:46:22.5000	-0.48	2.0877	1524
Fri Sep 17 2010 10:46:37.5000	-0.48	2.0867	1524
Fri Sep 17 2010 10:46:45.0000	-0.48	2.0824	1524
Fri Sep 17 2010 10:46:52.5000	-0.48	2.0864	1524
Fri Sep 17 2010 10:47:07.5000	-0.48	2.0877	1524
Fri Sep 17 2010 10:47:15.0000	-0.48	2.0851	1524
Fri Sep 17 2010 10:47:22.5000	-0.48	2.0821	1524
Fri Sep 17 2010 10:47:37.5000	-0.48	2.0851	1524
Fri Sep 17 2010 10:47:45.0000	-0.48	2.0857	1524
Fri Sep 17 2010 10:47:52.5000	-0.48	2.0881	1524
Fri Sep 17 2010 10:48:07.5000	-0.48	2.0841	1524
Fri Sep 17 2010 10:48:15.0000	-0.48	2.0851	1524
Fri Sep 17 2010 10:48:22.5000	-0.48	2.0908	1524
Fri Sep 17 2010 10:48:37.5000	-0.48	2.0898	1524
Fri Sep 17 2010 10:48:45.0000	-0.48	2.0861	1524
Fri Sep 17 2010 10:48:52.5000	-0.48	2.0821	1524
Fri Sep 17 2010 10:49:07.5000	-0.48	2.0857	1524
Fri Sep 17 2010 10:49:15.0000	-0.48	2.0844	1524
Fri Sep 17 2010 10:49:22.5000	-0.48	2.0841	1524
Fri Sep 17 2010 10:49:37.5000	5.005	2.0824	1524
Fri Sep 17 2010 10:49:45.0000	-0.48	2.0847	1524
Fri Sep 17 2010 10:49:52.5000	-0.48	2.0851	1524
Fri Sep 17 2010 10:50:07.5000	-0.48	2.0847	1524
Fri Sep 17 2010 10:50:15.0000	5.006	2.0857	1524
Fri Sep 17 2010 10:50:22.5000	5.005	2.0797	1523
Fri Sep 17 2010 10:50:37.5000	-0.48	2.0827	1523
Fri Sep 17 2010 10:50:45.0000	-0.48	2.0861	1523
Fri Sep 17 2010 10:50:52.5000	-0.48	2.0894	1523
Fri Sep 17 2010 10:51:07.5000	-0.48	2.0861	1523
Fri Sep 17 2010 10:51:15.0000	-0.48	2.0831	1523
Fri Sep 17 2010 10:51:22.5000	-0.48	2.0851	1523
Fri Sep 17 2010 10:51:37.5000	-0.48	2.0857	1523
Fri Sep 17 2010 10:51:45.0000	-0.48	2.0851	1523
Fri Sep 17 2010 10:51:52.5000	-0.48	2.0861	1523
Fri Sep 17 2010 10:52:07.5000	-0.48	2.0851	1523
Fri Sep 17 2010 10:52:15.0000	-0.48	2.0881	1523
Fri Sep 17 2010 10:52:22.5000	-0.48	2.0821	1524
Fri Sep 17 2010 10:52:37.5000	-0.48	2.0847	1524
Fri Sep 17 2010 10:52:45.0000	-0.48	2.0881	1524
Fri Sep 17 2010 10:52:52.5000	-0.48	2.0851	1524
Fri Sep 17 2010 10:53:07.5000	-0.48	2.0827	1524
Fri Sep 17 2010 10:53:15.0000	-0.48	2.0827	1524
Fri Sep 17 2010 10:53:22.5000	-0.48	2.0827	1525
Fri Sep 17 2010 10:53:37.5000	-0.48	2.0894	1525
Fri Sep 17 2010 10:53:45.0000	-0.48	2.0918	1525
Fri Sep 17 2010 10:53:52.5000	-0.48	2.0827	1525

Fri Sep 17 2010 10:54:07.5000	-0.48	2.0797	1525
Fri Sep 17 2010 10:54:15.0000	-0.48	2.0898	1525
Fri Sep 17 2010 10:54:22.5000	5.006	2.0898	1524
Fri Sep 17 2010 10:54:37.5000	-0.48	2.0857	1524
Fri Sep 17 2010 10:54:45.0000	-0.48	2.0901	1524
Fri Sep 17 2010 10:54:52.5000	-0.48	2.0821	1524
Fri Sep 17 2010 10:55:07.5000	-0.48	2.0911	1524
Fri Sep 17 2010 10:55:15.0000	-0.48	2.0864	1524
Fri Sep 17 2010 10:55:22.5000	-0.48	2.0891	1523
Fri Sep 17 2010 10:55:37.5000	-0.48	2.0877	1523
Fri Sep 17 2010 10:55:45.0000	-0.48	2.0857	1523
Fri Sep 17 2010 10:55:52.5000	-0.48	2.0884	1523
Fri Sep 17 2010 10:56:07.5000	-0.48	2.0804	1523
Fri Sep 17 2010 10:56:15.0000	-0.48	2.0821	1523
Fri Sep 17 2010 10:56:22.5000	-0.48	2.0794	1524
Fri Sep 17 2010 10:56:37.5000	-0.48	2.0914	1524
Fri Sep 17 2010 10:56:45.0000	-0.48	2.0804	1524
Fri Sep 17 2010 10:56:52.5000	-0.48	2.0851	1524
Fri Sep 17 2010 10:57:07.5000	-0.48	2.0814	1524
Fri Sep 17 2010 10:57:15.0000	-0.48	2.0807	1524
Fri Sep 17 2010 10:57:22.5000	-0.48	2.0861	1524
Fri Sep 17 2010 10:57:37.5000	-0.48	2.0844	1524
Fri Sep 17 2010 10:57:45.0000	5.006	2.0821	1524
Fri Sep 17 2010 10:57:52.5000	-0.48	2.0861	1524
Fri Sep 17 2010 10:58:07.5000	-0.48	2.0874	1524
Fri Sep 17 2010 10:58:15.0000	-0.48	2.0908	1524
Fri Sep 17 2010 10:58:22.5000	5.005	2.0867	1523
Fri Sep 17 2010 10:58:37.5000	5.006	2.0864	1523
Fri Sep 17 2010 10:58:45.0000	-0.48	2.0861	1523
Fri Sep 17 2010 10:58:52.5000	-0.48	2.0877	1523
Fri Sep 17 2010 10:59:07.5000	-0.48	2.0908	1523
Fri Sep 17 2010 10:59:15.0000	-0.48	2.0814	1523
Fri Sep 17 2010 10:59:22.5000	-0.48	2.0831	1523
Fri Sep 17 2010 10:59:37.5000	-0.48	2.0857	1523
Fri Sep 17 2010 10:59:45.0000	-0.48	2.0891	1523
Fri Sep 17 2010 10:59:52.5000	-0.48	2.0877	1523
Fri Sep 17 2010 11:00:07.5000	-0.48	2.0867	1523
Fri Sep 17 2010 11:00:15.0000	-0.48	2.0864	1523
Fri Sep 17 2010 11:00:22.5000	-0.48	2.0867	1524
Fri Sep 17 2010 11:00:37.5000	-0.48	2.0894	1524
Fri Sep 17 2010 11:00:45.0000	-0.48	2.0894	1524
Fri Sep 17 2010 11:00:52.5000	-0.48	2.0831	1524
Fri Sep 17 2010 11:01:07.5000	-0.48	2.0867	1524
Fri Sep 17 2010 11:01:15.0000	-0.48	2.0867	1524
Fri Sep 17 2010 11:01:22.5000	-0.48	2.0827	1525
Fri Sep 17 2010 11:01:37.5000	-0.48	2.0861	1525
Fri Sep 17 2010 11:01:45.0000	-0.48	2.0891	1525
Fri Sep 17 2010 11:01:52.5000	-0.48	2.0831	1525
Fri Sep 17 2010 11:02:07.5000	-0.48	2.0837	1525
Fri Sep 17 2010 11:02:15.0000	-0.48	2.0837	1525
Fri Sep 17 2010 11:02:22.5000	-0.48	2.0851	1524
Fri Sep 17 2010 11:02:37.5000	5.006	2.0877	1524
Fri Sep 17 2010 11:02:45.0000	-0.48	2.0837	1524
Fri Sep 17 2010 11:02:52.5000	-0.48	2.0837	1524
Fri Sep 17 2010 11:03:07.5000	-0.48	2.0861	1524
Fri Sep 17 2010 11:03:15.0000	-0.48	2.0827	1524
Fri Sep 17 2010 11:03:22.5000	-0.48	2.0911	1523
Fri Sep 17 2010 11:03:37.5000	-0.48	2.0841	1523
Fri Sep 17 2010 11:03:45.0000	-0.48	2.0864	1523

Fri Sep 17 2010 11:03:52.5000	-0.48	2.0811	1523
Fri Sep 17 2010 11:04:07.5000	-0.48	2.0898	1523
Fri Sep 17 2010 11:04:15.0000	-0.48	2.0867	1523
Fri Sep 17 2010 11:04:22.5000	-0.48	2.0894	1524
Fri Sep 17 2010 11:04:37.5000	-0.48	2.0881	1524
Fri Sep 17 2010 11:04:45.0000	-0.48	2.0881	1524
Fri Sep 17 2010 11:04:52.5000	-0.48	2.0861	1524
Fri Sep 17 2010 11:05:07.5000	-0.48	2.0841	1524
Fri Sep 17 2010 11:05:15.0000	-0.48	2.0877	1524
Fri Sep 17 2010 11:05:22.5000	-0.48	2.0851	1524
Fri Sep 17 2010 11:05:37.5000	-0.48	2.0898	1524
Fri Sep 17 2010 11:05:45.0000	5.006	2.0844	1524
Fri Sep 17 2010 11:05:52.5000	5.006	2.0851	1524
average			1529

Nailite International, Inc
Facility ID: 0250407

2009 Destruction Effeciency Testing

Friday 09/17/2010
Trial 2
Paint Line 2
Product Name: Cape Cod Gray

Booth #	1
Nailite Coating Name*	Cape Cod Gray
Nailite Color Number	tbd
Manufacturer	Strathmore
Begin Trial Time	12:00
End Trial Time	1:00
Begin Trial Volume (Reduced Paint-gal)	71
End Trial Volume (Reduced Paint-gal)	45
Volume of Reduced Paint Used-gal	26
Cut Ratio (expressed as % solvent)	35
Cut Ratio (expressed as % paint)	65
% Toluene used as % of total reducer	100
% Hisol used as % of total reducer	0
% Acetone used as % of total reducer	0
Volume of Paint used (nonreduced)	16.9
Volume of Reducer-Toluene	9.1
Volume of Reducer-Hisol Used	0
Volume of Reducer-Acetone	0

*See attached MSDS for coating information, VOC composition etc.

PAINT LINE 2 SUMMARY PAINT LINE 2 SUMMARY PAINT LINE 2 SUMMARY

Gallons of Booth 1 paint used**	16.90
Gallons of toluene used	9.10
Gallons of hisol used	0.00
Gallons of acetone used	0.00
Total fluid applied	26.00

Time	eZtrend QXe - gas on/off	eZtrend QXe - p2 run mode	eZtrend QXe - p1 ave. comb temp.
Fri Sep 17 2010 12:00:07.5000	-0.48	2.0978	1520
Fri Sep 17 2010 12:00:15.0000	-0.48	2.0931	1520
Fri Sep 17 2010 12:00:22.5000	-0.48	2.075	1519
Fri Sep 17 2010 12:00:37.5000	-0.48	2.0426	1519
Fri Sep 17 2010 12:00:45.0000	-0.48	2.072	1519
Fri Sep 17 2010 12:00:52.5000	-0.48	2.067	1519
Fri Sep 17 2010 12:01:07.5000	-0.48	2.053	1519
Fri Sep 17 2010 12:01:15.0000	-0.48	2.0831	1519
Fri Sep 17 2010 12:01:22.5000	-0.48	2.0804	1520
Fri Sep 17 2010 12:01:37.5000	-0.48	2.0827	1520
Fri Sep 17 2010 12:01:45.0000	-0.48	2.0851	1520
Fri Sep 17 2010 12:01:52.5000	-0.48	2.0934	1520
Fri Sep 17 2010 12:02:07.5000	-0.48	2.1005	1520
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Fri Sep 17 2010 12:03:37.5000	-0.48	2.1075	1521
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Fri Sep 17 2010 12:03:52.5000	-0.48	2.0864	1521
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Fri Sep 17 2010 12:04:45.0000	-0.48	2.1198	1521
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Fri Sep 17 2010 12:05:22.5000	-0.48	2.0857	1523
Fri Sep 17 2010 12:05:37.5000	-0.48	2.0781	1523
Fri Sep 17 2010 12:05:45.0000	-0.48	2.0837	1523
Fri Sep 17 2010 12:05:52.5000	-0.48	2.1018	1523
Fri Sep 17 2010 12:06:07.5000	-0.48	2.0757	1523
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Fri Sep 17 2010 12:07:52.5000	-0.48	2.0707	1526
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Fri Sep 17 2010 12:08:22.5000	-0.48	2.1175	1525
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Fri Sep 17 2010 12:54:15.0000	-0.48	2.1389	1559
Fri Sep 17 2010 12:54:22.5000	-0.48	2.0837	1558
Fri Sep 17 2010 12:54:37.5000	-0.48	2.0078	1558
Fri Sep 17 2010 12:54:45.0000	-0.48	2.0667	1558
Fri Sep 17 2010 12:54:52.5000	-0.48	2.1931	1558
Fri Sep 17 2010 12:55:07.5000	-0.48	2.1386	1558
Fri Sep 17 2010 12:55:15.0000	-0.48	2.2258	1558
Fri Sep 17 2010 12:55:22.5000	-0.48	1.9744	1558
Fri Sep 17 2010 12:55:37.5000	-0.48	2.1867	1558
Fri Sep 17 2010 12:55:45.0000	-0.48	2.0506	1558
Fri Sep 17 2010 12:55:52.5000	-0.48	2.071	1558
Fri Sep 17 2010 12:56:07.5000	-0.48	2.2165	1558
Fri Sep 17 2010 12:56:15.0000	-0.48	2.1275	1558
Fri Sep 17 2010 12:56:22.5000	-0.48	2.05	1556
Fri Sep 17 2010 12:56:37.5000	-0.48	1.9323	1556
Fri Sep 17 2010 12:56:45.0000	-0.48	2.0961	1556
Fri Sep 17 2010 12:56:52.5000	-0.48	2.2068	1556
Fri Sep 17 2010 12:57:07.5000	-0.48	2.1613	1556
Fri Sep 17 2010 12:57:15.0000	-0.48	2.1964	1556
Fri Sep 17 2010 12:57:22.5000	-0.48	1.9456	1553
Fri Sep 17 2010 12:57:37.5000	-0.48	2.2369	1553
Fri Sep 17 2010 12:57:45.0000	-0.48	2.2476	1553
Fri Sep 17 2010 12:57:52.5000	-0.48	2.0249	1553
Fri Sep 17 2010 12:58:07.5000	-0.48	1.9918	1553
Fri Sep 17 2010 12:58:15.0000	-0.48	1.9918	1553
Fri Sep 17 2010 12:58:22.5000	-0.48	2.162	1550
Fri Sep 17 2010 12:58:37.5000	-0.48	2.1145	1550
Fri Sep 17 2010 12:58:45.0000	-0.48	2.1095	1550
Fri Sep 17 2010 12:58:52.5000	4.982	1.9828	1550
Fri Sep 17 2010 12:59:07.5000	-0.48	1.9373	1550
Fri Sep 17 2010 12:59:15.0000	-0.48	1.9931	1550
Fri Sep 17 2010 12:59:22.5000	-0.48	2.1687	1547
Fri Sep 17 2010 12:59:37.5000	5.005	2.0861	1547
Fri Sep 17 2010 12:59:45.0000	-0.48	1.9527	1547

Fri Sep 17 2010 12:59:52.5000	-0.48	2.075	1547
Fri Sep 17 2010 13:00:07.5000	5.009	2.0684	1547
Fri Sep 17 2010 13:00:15.0000	5.005	1.9543	1547
Fri Sep 17 2010 13:00:22.5000	-0.48	2.1058	1544
Fri Sep 17 2010 13:00:37.5000	-0.48	2.0841	1544
Fri Sep 17 2010 13:00:45.0000	-0.48	2.1208	1544
Fri Sep 17 2010 13:00:52.5000	5.013	2.0874	1544
average			1544

Nailite International, Inc
Facility ID: 0250407

2010 Destruction Effeciency Testing

Friday 09/17/2010
Trial 3
Paint Line 2
Product Name: Cape Cod Gray

Booth #	1
Nailite Coating Name*	Cape Cod Gray
Nailite Color Number	tbd
Manufacturer	Strathmore
Begin Trial Time	1:34
End Trial Time**	2:34
Begin Trial Volume (Reduced Paint-gal)	45
End Trial Volume (Reduced Paint-gal)	6
Volume of Reduced Paint Used-gal	39
Cut Ratio (expressed as % solvent)	42
Cut Ratio (expressed as % paint)	58
% Toluene used as % of total reducer	100
% Hisol used as % of total reducer	0
% Acetone used as % of total reducer	0
Volume of Paint used (nonreduced)	22.62
Volume of Reducer-Toluene	16.38
Volume of Reducer-Hisol Used	0
Volume of Reducer-Acetone	0

**See attached MSDS for coating information, VOC composition etc.*

PAINT LINE 2 SUMMARY PAINT LINE 2 SUMMARY PAINT LINE 2 SUMMARY

Gallons of Booth 1 paint used**	22.62
Gallons of toluene used	16.38
Gallons of hisol used	0.00
Gallons of acetone used	0.00
Total fluid applied	39.00

Time	eZtrend QXe - gas on/off	eZtrend QXe - p2 run mode	eZtrend QXe - p1 ave. comb temp.
Fri Sep 17 2010 13:34:00.0000	-0.48	2.0867	1513
Fri Sep 17 2010 13:34:10.0000	-0.48	2.0831	1513
Fri Sep 17 2010 13:34:20.0000	-0.48	2.0857	1514
Fri Sep 17 2010 13:34:30.0000	-0.48	2.0814	1514
Fri Sep 17 2010 13:34:40.0000	-0.48	2.0821	1514
Fri Sep 17 2010 13:34:50.0000	-0.48	2.0857	1514
Fri Sep 17 2010 13:35:00.0000	-0.48	2.0891	1514
Fri Sep 17 2010 13:35:10.0000	-0.48	2.0837	1514
Fri Sep 17 2010 13:35:20.0000	-0.48	2.0861	1517
Fri Sep 17 2010 13:35:30.0000	-0.48	2.0807	1517
Fri Sep 17 2010 13:35:40.0000	-0.48	2.0891	1517
Fri Sep 17 2010 13:35:50.0000	-0.48	2.0847	1517
Fri Sep 17 2010 13:36:00.0000	-0.48	2.0827	1517
Fri Sep 17 2010 13:36:10.0000	-0.48	2.0861	1517
Fri Sep 17 2010 13:36:20.0000	-0.48	2.0884	1519
Fri Sep 17 2010 13:36:30.0000	-0.48	2.0841	1519
Fri Sep 17 2010 13:36:40.0000	-0.48	2.0851	1519
Fri Sep 17 2010 13:36:50.0000	-0.48	2.0861	1519
Fri Sep 17 2010 13:37:00.0000	-0.48	2.0867	1519
Fri Sep 17 2010 13:37:10.0000	-0.48	2.0861	1519
Fri Sep 17 2010 13:37:20.0000	-0.48	2.0851	1521
Fri Sep 17 2010 13:37:30.0000	-0.48	2.0864	1521
Fri Sep 17 2010 13:37:40.0000	-0.48	2.0841	1521
Fri Sep 17 2010 13:37:50.0000	-0.48	2.0861	1521
Fri Sep 17 2010 13:38:00.0000	-0.48	2.0861	1521
Fri Sep 17 2010 13:38:10.0000	-0.48	2.0874	1521
Fri Sep 17 2010 13:38:20.0000	-0.48	2.0857	1521
Fri Sep 17 2010 13:38:30.0000	-0.48	2.0837	1521
Fri Sep 17 2010 13:38:40.0000	-0.48	2.0877	1521
Fri Sep 17 2010 13:38:50.0000	-0.48	2.0861	1521
Fri Sep 17 2010 13:39:00.0000	-0.48	2.0857	1521
Fri Sep 17 2010 13:39:10.0000	-0.48	2.0851	1521
Fri Sep 17 2010 13:39:20.0000	-0.48	2.0864	1523
Fri Sep 17 2010 13:39:30.0000	-0.48	2.0857	1523
Fri Sep 17 2010 13:39:40.0000	-0.48	2.0861	1523
Fri Sep 17 2010 13:39:50.0000	-0.48	2.0851	1523
Fri Sep 17 2010 13:40:00.0000	-0.48	2.0861	1523
Fri Sep 17 2010 13:40:10.0000	-0.48	2.0877	1523
Fri Sep 17 2010 13:40:20.0000	-0.48	2.0857	1525
Fri Sep 17 2010 13:40:30.0000	-0.48	2.0851	1525
Fri Sep 17 2010 13:40:40.0000	-0.48	2.0864	1525
Fri Sep 17 2010 13:40:50.0000	-0.48	2.0867	1525
Fri Sep 17 2010 13:41:00.0000	-0.48	2.0867	1525
Fri Sep 17 2010 13:41:10.0000	-0.48	2.0861	1525
Fri Sep 17 2010 13:41:20.0000	-0.48	2.0857	1527
Fri Sep 17 2010 13:41:30.0000	-0.48	2.0867	1527
Fri Sep 17 2010 13:41:40.0000	-0.48	2.0864	1527
Fri Sep 17 2010 13:41:50.0000	-0.48	2.0864	1527
Fri Sep 17 2010 13:42:00.0000	-0.48	2.0864	1527
Fri Sep 17 2010 13:42:10.0000	-0.48	2.0861	1527
Fri Sep 17 2010 13:42:20.0000	-0.48	2.0844	1528
Fri Sep 17 2010 13:42:30.0000	-0.48	2.0864	1528
Fri Sep 17 2010 13:42:40.0000	-0.48	2.0877	1528
Fri Sep 17 2010 13:42:50.0000	-0.48	2.0831	1528
Fri Sep 17 2010 13:43:00.0000	-0.48	2.0877	1528
Fri Sep 17 2010 13:43:10.0000	-0.48	2.0851	1528
Fri Sep 17 2010 13:43:20.0000	-0.48	2.0864	1531
Fri Sep 17 2010 13:43:30.0000	-0.48	2.0884	1531
Fri Sep 17 2010 13:43:40.0000	-0.48	2.0864	1531
Fri Sep 17 2010 13:43:50.0000	-0.48	2.0867	1531
Fri Sep 17 2010 13:44:00.0000	-0.48	2.0841	1531

Fri Sep 17 2010 13:44:10.0000	-0.48	2.0867	1531
Fri Sep 17 2010 13:44:20.0000	-0.48	2.0867	1534
Fri Sep 17 2010 13:44:30.0000	-0.48	2.0867	1534
Fri Sep 17 2010 13:44:40.0000	-0.48	2.0864	1534
Fri Sep 17 2010 13:44:50.0000	-0.48	2.0857	1534
Fri Sep 17 2010 13:45:00.0000	-0.48	2.0857	1534
Fri Sep 17 2010 13:45:10.0000	-0.48	2.0851	1534
Fri Sep 17 2010 13:45:20.0000	-0.48	2.0874	1536
Fri Sep 17 2010 13:45:30.0000	-0.48	2.0867	1536
Fri Sep 17 2010 13:45:40.0000	-0.48	2.0857	1536
Fri Sep 17 2010 13:45:50.0000	-0.48	2.0844	1536
Fri Sep 17 2010 13:46:00.0000	-0.48	2.0864	1536
Fri Sep 17 2010 13:46:10.0000	-0.48	2.0851	1536
Fri Sep 17 2010 13:46:20.0000	-0.48	2.0864	1536
Fri Sep 17 2010 13:46:30.0000	-0.48	2.0861	1536
Fri Sep 17 2010 13:46:40.0000	-0.48	2.0841	1536
Fri Sep 17 2010 13:46:50.0000	-0.48	2.0857	1536
Fri Sep 17 2010 13:47:00.0000	-0.48	2.0861	1536
Fri Sep 17 2010 13:47:10.0000	-0.48	2.0851	1536
Fri Sep 17 2010 13:47:20.0000	-0.48	2.0867	1537
Fri Sep 17 2010 13:47:30.0000	-0.48	2.0874	1537
Fri Sep 17 2010 13:47:40.0000	-0.48	2.0884	1537
Fri Sep 17 2010 13:47:50.0000	-0.48	2.0844	1537
Fri Sep 17 2010 13:48:00.0000	-0.48	2.0861	1537
Fri Sep 17 2010 13:48:10.0000	-0.48	2.0861	1537
Fri Sep 17 2010 13:48:20.0000	-0.48	2.0867	1540
Fri Sep 17 2010 13:48:30.0000	-0.48	2.0851	1540
Fri Sep 17 2010 13:48:40.0000	-0.48	2.0841	1540
Fri Sep 17 2010 13:48:50.0000	-0.48	2.0864	1540
Fri Sep 17 2010 13:49:00.0000	-0.48	2.0867	1540
Fri Sep 17 2010 13:49:10.0000	-0.48	2.0857	1540
Fri Sep 17 2010 13:49:20.0000	-0.48	2.0867	1541
Fri Sep 17 2010 13:49:30.0000	-0.48	2.0851	1541
Fri Sep 17 2010 13:49:40.0000	-0.48	2.0867	1541
Fri Sep 17 2010 13:49:50.0000	-0.48	2.0867	1541
Fri Sep 17 2010 13:50:00.0000	-0.48	2.0861	1541
Fri Sep 17 2010 13:50:10.0000	-0.48	2.0851	1541
Fri Sep 17 2010 13:50:20.0000	-0.48	2.0861	1541
Fri Sep 17 2010 13:50:30.0000	-0.48	2.0867	1541
Fri Sep 17 2010 13:50:40.0000	-0.48	2.0861	1541
Fri Sep 17 2010 13:50:50.0000	-0.48	2.0857	1541
Fri Sep 17 2010 13:51:00.0000	-0.48	2.0874	1541
Fri Sep 17 2010 13:51:10.0000	-0.48	2.0857	1541
Fri Sep 17 2010 13:51:20.0000	-0.48	2.0851	1543
Fri Sep 17 2010 13:51:30.0000	-0.48	2.0874	1543
Fri Sep 17 2010 13:51:40.0000	-0.48	2.0857	1543
Fri Sep 17 2010 13:51:50.0000	-0.48	2.0867	1543
Fri Sep 17 2010 13:52:00.0000	-0.48	2.0851	1543
Fri Sep 17 2010 13:52:10.0000	-0.48	2.0857	1543
Fri Sep 17 2010 13:52:20.0000	-0.48	2.0831	1545
Fri Sep 17 2010 13:52:30.0000	-0.48	2.0857	1545
Fri Sep 17 2010 13:52:40.0000	-0.48	2.0837	1545
Fri Sep 17 2010 13:52:50.0000	-0.48	2.0857	1545
Fri Sep 17 2010 13:53:00.0000	-0.48	2.0864	1545
Fri Sep 17 2010 13:53:10.0000	-0.48	2.0857	1545
Fri Sep 17 2010 13:53:20.0000	-0.48	2.0857	1548
Fri Sep 17 2010 13:53:30.0000	-0.48	2.0867	1548
Fri Sep 17 2010 13:53:40.0000	-0.48	2.0864	1548
Fri Sep 17 2010 13:53:50.0000	-0.48	2.0864	1548
Fri Sep 17 2010 13:54:00.0000	-0.48	2.0861	1548
Fri Sep 17 2010 13:54:10.0000	-0.48	2.0861	1548
Fri Sep 17 2010 13:54:20.0000	-0.48	2.0857	1548

Fri Sep 17 2010 13:54:30.0000	-0.48	2.0857	1548
Fri Sep 17 2010 13:54:40.0000	-0.48	2.0851	1548
Fri Sep 17 2010 13:54:50.0000	-0.48	2.0861	1548
Fri Sep 17 2010 13:55:00.0000	-0.48	2.0847	1548
Fri Sep 17 2010 13:55:10.0000	-0.48	2.0851	1548
Fri Sep 17 2010 13:55:20.0000	-0.48	2.0867	1549
Fri Sep 17 2010 13:55:30.0000	-0.48	2.0864	1549
Fri Sep 17 2010 13:55:40.0000	-0.48	2.0851	1549
Fri Sep 17 2010 13:55:50.0000	-0.48	2.0861	1549
Fri Sep 17 2010 13:56:00.0000	-0.48	2.0861	1549
Fri Sep 17 2010 13:56:10.0000	-0.48	2.0851	1549
Fri Sep 17 2010 13:56:20.0000	-0.48	2.0861	1551
Fri Sep 17 2010 13:56:30.0000	-0.48	2.0857	1551
Fri Sep 17 2010 13:56:40.0000	-0.48	2.0867	1551
Fri Sep 17 2010 13:56:50.0000	-0.48	2.0867	1551
Fri Sep 17 2010 13:57:00.0000	-0.48	2.0857	1551
Fri Sep 17 2010 13:57:10.0000	-0.48	2.0864	1551
Fri Sep 17 2010 13:57:20.0000	-0.48	2.0857	1553
Fri Sep 17 2010 13:57:30.0000	-0.48	2.0864	1553
Fri Sep 17 2010 13:57:40.0000	-0.48	2.0861	1553
Fri Sep 17 2010 13:57:50.0000	-0.48	2.0864	1553
Fri Sep 17 2010 13:58:00.0000	-0.48	2.0864	1553
Fri Sep 17 2010 13:58:10.0000	-0.48	2.0864	1553
Fri Sep 17 2010 13:58:20.0000	-0.48	2.0861	1554
Fri Sep 17 2010 13:58:30.0000	-0.48	2.0857	1554
Fri Sep 17 2010 13:58:40.0000	-0.48	2.0861	1554
Fri Sep 17 2010 13:58:50.0000	-0.48	2.0847	1554
Fri Sep 17 2010 13:59:00.0000	-0.48	2.0861	1554
Fri Sep 17 2010 13:59:10.0000	-0.48	2.0857	1554
Fri Sep 17 2010 13:59:20.0000	-0.48	2.0861	1554
Fri Sep 17 2010 13:59:30.0000	-0.48	2.0857	1554
Fri Sep 17 2010 13:59:40.0000	-0.48	2.0851	1554
Fri Sep 17 2010 13:59:50.0000	-0.48	2.0861	1554
Fri Sep 17 2010 14:00:00.0000	-0.48	2.0857	1554
Fri Sep 17 2010 14:00:10.0000	-0.48	2.0861	1554
Fri Sep 17 2010 14:00:20.0000	-0.48	2.0864	1557
Fri Sep 17 2010 14:00:30.0000	-0.48	2.0857	1557
Fri Sep 17 2010 14:00:40.0000	-0.48	2.0847	1557
Fri Sep 17 2010 14:00:50.0000	-0.48	2.0864	1557
Fri Sep 17 2010 14:01:00.0000	-0.48	2.0867	1557
Fri Sep 17 2010 14:01:10.0000	-0.48	2.0861	1557
Fri Sep 17 2010 14:01:20.0000	-0.48	2.0867	1559
Fri Sep 17 2010 14:01:30.0000	-0.48	2.0867	1559
Fri Sep 17 2010 14:01:40.0000	-0.48	2.0857	1559
Fri Sep 17 2010 14:01:50.0000	-0.48	2.0864	1559
Fri Sep 17 2010 14:02:00.0000	-0.48	2.0861	1559
Fri Sep 17 2010 14:02:10.0000	-0.48	2.0867	1559
Fri Sep 17 2010 14:02:20.0000	-0.48	2.0861	1560
Fri Sep 17 2010 14:02:30.0000	-0.48	2.0874	1560
Fri Sep 17 2010 14:02:40.0000	-0.48	2.0851	1560
Fri Sep 17 2010 14:02:50.0000	-0.48	2.0857	1560
Fri Sep 17 2010 14:03:00.0000	-0.48	2.0861	1560
Fri Sep 17 2010 14:03:10.0000	-0.48	2.0844	1560
Fri Sep 17 2010 14:03:20.0000	-0.48	2.0857	1560
Fri Sep 17 2010 14:03:30.0000	-0.48	2.0864	1560
Fri Sep 17 2010 14:03:40.0000	-0.48	2.0861	1560
Fri Sep 17 2010 14:03:50.0000	-0.48	2.0867	1560
Fri Sep 17 2010 14:04:00.0000	-0.48	2.0861	1560
Fri Sep 17 2010 14:04:10.0000	-0.48	2.0851	1560
Fri Sep 17 2010 14:04:20.0000	-0.48	2.0861	1562
Fri Sep 17 2010 14:04:30.0000	-0.48	2.0851	1562
Fri Sep 17 2010 14:04:40.0000	-0.48	2.0857	1562

Fri Sep 17 2010 14:04:50.0000	-0.48	2.0864	1562
Fri Sep 17 2010 14:05:00.0000	-0.48	2.0861	1562
Fri Sep 17 2010 14:05:10.0000	-0.48	2.0841	1562
Fri Sep 17 2010 14:05:20.0000	-0.48	2.0864	1564
Fri Sep 17 2010 14:05:30.0000	-0.48	2.0844	1564
Fri Sep 17 2010 14:05:40.0000	-0.48	2.0847	1564
Fri Sep 17 2010 14:05:50.0000	-0.48	2.0857	1564
Fri Sep 17 2010 14:06:00.0000	-0.48	2.0847	1564
Fri Sep 17 2010 14:06:10.0000	-0.48	2.0851	1564
Fri Sep 17 2010 14:06:20.0000	-0.48	2.0867	1564
Fri Sep 17 2010 14:06:30.0000	-0.48	2.0847	1564
Fri Sep 17 2010 14:06:40.0000	-0.48	2.0851	1564
Fri Sep 17 2010 14:06:50.0000	-0.48	2.0861	1564
Fri Sep 17 2010 14:07:00.0000	-0.48	2.0867	1564
Fri Sep 17 2010 14:07:10.0000	-0.48	2.0874	1564
Fri Sep 17 2010 14:07:20.0000	-0.48	2.0867	1564
Fri Sep 17 2010 14:07:30.0000	-0.48	2.0867	1564
Fri Sep 17 2010 14:07:40.0000	-0.48	2.0857	1564
Fri Sep 17 2010 14:07:50.0000	-0.48	2.0851	1564
Fri Sep 17 2010 14:08:00.0000	-0.48	2.0844	1564
Fri Sep 17 2010 14:08:10.0000	-0.48	2.0847	1564
Fri Sep 17 2010 14:08:20.0000	-0.48	2.0864	1566
Fri Sep 17 2010 14:08:30.0000	-0.48	2.0861	1566
Fri Sep 17 2010 14:08:40.0000	-0.48	2.0874	1566
Fri Sep 17 2010 14:08:50.0000	-0.48	2.0864	1566
Fri Sep 17 2010 14:09:00.0000	-0.48	2.0864	1566
Fri Sep 17 2010 14:09:10.0000	-0.48	2.0861	1566
Fri Sep 17 2010 14:09:20.0000	-0.48	2.0874	1568
Fri Sep 17 2010 14:09:30.0000	-0.48	2.0851	1568
Fri Sep 17 2010 14:09:40.0000	-0.48	2.0851	1568
Fri Sep 17 2010 14:09:50.0000	-0.48	2.0851	1568
Fri Sep 17 2010 14:10:00.0000	-0.48	2.0851	1568
Fri Sep 17 2010 14:10:10.0000	-0.48	2.0874	1568
Fri Sep 17 2010 14:10:20.0000	-0.48	2.0864	1569
Fri Sep 17 2010 14:10:30.0000	-0.48	2.0847	1569
Fri Sep 17 2010 14:10:40.0000	-0.48	2.0861	1569
Fri Sep 17 2010 14:10:50.0000	-0.48	2.0851	1569
Fri Sep 17 2010 14:11:00.0000	-0.48	2.0857	1569
Fri Sep 17 2010 14:11:10.0000	-0.48	2.0864	1569
Fri Sep 17 2010 14:11:20.0000	-0.48	2.0864	1569
Fri Sep 17 2010 14:11:30.0000	-0.48	2.0867	1569
Fri Sep 17 2010 14:11:40.0000	-0.48	2.0867	1569
Fri Sep 17 2010 14:11:50.0000	-0.48	2.0867	1569
Fri Sep 17 2010 14:12:00.0000	-0.48	2.0857	1569
Fri Sep 17 2010 14:12:10.0000	-0.48	2.0864	1569
Fri Sep 17 2010 14:12:20.0000	-0.48	2.0847	1570
Fri Sep 17 2010 14:12:30.0000	-0.48	2.0867	1570
Fri Sep 17 2010 14:12:40.0000	-0.48	2.0861	1570
Fri Sep 17 2010 14:12:50.0000	-0.48	2.0851	1570
Fri Sep 17 2010 14:13:00.0000	-0.48	2.0881	1570
Fri Sep 17 2010 14:13:10.0000	-0.48	2.0861	1570
Fri Sep 17 2010 14:13:20.0000	-0.48	2.0867	1572
Fri Sep 17 2010 14:13:30.0000	-0.48	2.0851	1572
Fri Sep 17 2010 14:13:40.0000	-0.48	2.0851	1572
Fri Sep 17 2010 14:13:50.0000	-0.48	2.0864	1572
Fri Sep 17 2010 14:14:00.0000	-0.48	2.0847	1572
Fri Sep 17 2010 14:14:10.0000	-0.48	2.0864	1572
Fri Sep 17 2010 14:14:20.0000	-0.48	2.0857	1573
Fri Sep 17 2010 14:14:30.0000	-0.48	2.0857	1573
Fri Sep 17 2010 14:14:40.0000	-0.48	2.0861	1573
Fri Sep 17 2010 14:14:50.0000	-0.48	2.0861	1573
Fri Sep 17 2010 14:15:00.0000	-0.48	2.0861	1573

Fri Sep 17 2010 14:15:10.0000	-0.48	2.0864	1573
Fri Sep 17 2010 14:15:20.0000	-0.48	2.0857	1573
Fri Sep 17 2010 14:15:30.0000	-0.48	2.0861	1573
Fri Sep 17 2010 14:15:40.0000	-0.48	2.0857	1573
Fri Sep 17 2010 14:15:50.0000	-0.48	2.0867	1573
Fri Sep 17 2010 14:16:00.0000	-0.48	2.0874	1573
Fri Sep 17 2010 14:16:10.0000	-0.48	2.0877	1573
Fri Sep 17 2010 14:16:20.0000	-0.48	2.0857	1574
Fri Sep 17 2010 14:16:30.0000	-0.48	2.0861	1574
Fri Sep 17 2010 14:16:40.0000	-0.48	2.0861	1574
Fri Sep 17 2010 14:16:50.0000	-0.48	2.0857	1574
Fri Sep 17 2010 14:17:00.0000	-0.48	2.0864	1574
Fri Sep 17 2010 14:17:10.0000	-0.48	2.0864	1574
Fri Sep 17 2010 14:17:20.0000	-0.48	2.0861	1576
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Fri Sep 17 2010 14:17:40.0000	-0.48	2.0857	1576
Fri Sep 17 2010 14:17:50.0000	-0.48	2.0864	1576
Fri Sep 17 2010 14:18:00.0000	-0.48	2.0867	1576
Fri Sep 17 2010 14:18:10.0000	-0.48	2.0864	1576
Fri Sep 17 2010 14:18:20.0000	-0.48	2.0847	1577
Fri Sep 17 2010 14:18:30.0000	-0.48	2.0861	1577
Fri Sep 17 2010 14:18:40.0000	-0.48	2.0864	1577
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Fri Sep 17 2010 14:19:00.0000	-0.48	2.0857	1577
Fri Sep 17 2010 14:19:10.0000	-0.48	2.0861	1577
Fri Sep 17 2010 14:19:20.0000	-0.48	2.0861	1577
Fri Sep 17 2010 14:19:30.0000	-0.48	2.0867	1577
Fri Sep 17 2010 14:19:40.0000	-0.48	2.0851	1577
Fri Sep 17 2010 14:19:50.0000	-0.48	2.0857	1577
Fri Sep 17 2010 14:20:00.0000	-0.48	2.0841	1577
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Fri Sep 17 2010 14:20:30.0000	-0.48	2.0864	1578
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Fri Sep 17 2010 14:21:00.0000	-0.48	2.0861	1578
Fri Sep 17 2010 14:21:10.0000	-0.48	2.0864	1578
Fri Sep 17 2010 14:21:20.0000	-0.48	2.0844	1579
Fri Sep 17 2010 14:21:30.0000	-0.48	2.0864	1579
Fri Sep 17 2010 14:21:40.0000	-0.48	2.0847	1579
Fri Sep 17 2010 14:21:50.0000	-0.48	2.0857	1579
Fri Sep 17 2010 14:22:00.0000	-0.48	2.0861	1579
Fri Sep 17 2010 14:22:10.0000	-0.48	2.0891	1579
Fri Sep 17 2010 14:22:20.0000	-0.48	2.0901	1580
Fri Sep 17 2010 14:22:30.0000	-0.48	2.0877	1580
Fri Sep 17 2010 14:22:40.0000	-0.48	2.0851	1580
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Fri Sep 17 2010 14:23:00.0000	-0.48	2.0911	1580
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Fri Sep 17 2010 14:23:40.0000	-0.48	2.0827	1580
Fri Sep 17 2010 14:23:50.0000	-0.48	2.0894	1580
Fri Sep 17 2010 14:24:00.0000	-0.48	2.0851	1580
Fri Sep 17 2010 14:24:10.0000	-0.48	2.0831	1580
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Fri Sep 17 2010 14:24:30.0000	-0.48	2.0861	1581
Fri Sep 17 2010 14:24:40.0000	-0.48	2.0837	1581
Fri Sep 17 2010 14:24:50.0000	-0.48	2.0898	1581
Fri Sep 17 2010 14:25:00.0000	-0.48	2.0891	1581
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Fri Sep 17 2010 14:25:30.0000	-0.48	2.0844	1582
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Fri Sep 17 2010 14:26:20.0000	-0.48	2.0938	1584
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Fri Sep 17 2010 14:29:30.0000	-0.48	2.0837	1585
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Fri Sep 17 2010 14:30:00.0000	-0.48	2.0814	1585
Fri Sep 17 2010 14:30:10.0000	-0.48	2.0894	1585
Fri Sep 17 2010 14:30:20.0000	-0.48	2.0844	1586
Fri Sep 17 2010 14:30:30.0000	-0.48	2.0851	1586
Fri Sep 17 2010 14:30:40.0000	-0.48	2.0844	1586
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Fri Sep 17 2010 14:31:00.0000	-0.48	2.0791	1586
Fri Sep 17 2010 14:31:10.0000	-0.48	2.0844	1586
Fri Sep 17 2010 14:31:20.0000	-0.48	2.0898	1586
Fri Sep 17 2010 14:31:30.0000	-0.48	2.0864	1586
Fri Sep 17 2010 14:31:40.0000	-0.48	2.0841	1586
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Fri Sep 17 2010 14:32:10.0000	-0.48	2.0831	1586
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Fri Sep 17 2010 14:33:30.0000	-0.48	2.0831	1585
Fri Sep 17 2010 14:33:40.0000	-0.48	2.0837	1585
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Fri Sep 17 2010 14:34:00.0000	-0.48	2.0867	1585
Fri Sep 17 2010 14:34:10.0000	-0.48	2.0874	1585
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Fri Sep 17 2010 14:35:50.0000	-0.48	2.0851	1582
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Fri Sep 17 2010 14:36:30.0000	-0.48	2.0851	1579
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Fri Sep 17 2010 14:37:30.0000	5.006	2.0847	1578
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Fri Sep 17 2010 14:44:40.0000	-0.48	2.0837	1567
Fri Sep 17 2010 14:44:50.0000	-0.48	2.0857	1567
average			1560

B-2

Plant Operating Data

COATINGS MSDS

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: PLASTICEL (E35-0142) L2H CAPE COD GRAY
PRODUCT CLASS: ACRYLIC COATING HMIS CODES:H F R P
PRODUCT CODE: E35-0184

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: STRATHMORE PRODUCTS, INC.
ADDRESS1970 WEST FAYETTE STREET
P.O. BOX 151
SYRACUSE, NY 13201
EMERGENCY PHONE DAY: 315-488-5401
NIGHT: FOR HEALTH - POISON CONTROL CENTER: 315/476-4766
FOR SPILLS - CHEMTEL: 1-800/255-3924
DATE OF PREPARATION: 5/18/2006
TIME OF PREPARATION: 09:41:59 REVISION DATE: 02/03/06

SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP		RANGE PERCENT
* TOLUENE	108-88-3	38	68	20-30%
ACGIH TLV: 50 PPM OSHA PEL: 200 PPM				
+ TITANIUM DIOXIDE	13463-67-7			
ACGIH TLV: 10 MG/M3 OSHA PEL: 15 MG/M3				
PHYL ACETATE	79-20-9	228	20°C	10-20%
ACGIH TLV: 200 PPM OSHA PEL: 200 PPM				
* XYLENE	1330-20-7	9.5		5-15%
ACGIH TLV: 100.0 PPM OSHA PEL: 100.0 PPM				
+ AMORPHOUS SILICA	61790-53-2			
ACGIH TLV: 10.0 MG/M3 OSHA PEL: 6.0 MG/M3				
* ETHYLBENZENE	100-41-4	7.1	68	0-2%
ACGIH TLV: 100 PPM OSHA PEL: 100 PPM				
CARBON BLACK	1333-86-4			
ACGIH TLV: 3.5 MG/M3 OSHA PEL: 3.5 MG/M3				

SARA 313 INFORMATION:
* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

+ Indicates component(s) considered nuisance dust(s) in their dry form.

FOOTNOTE:
*N/A

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE OF SEC. II: 135°F - 279°F WEIGHT per GALLON: 9.87 lb/gl
VAPOR DENSITY: HEAVIER THAN AIR
EVAPORATION RATE: SLOWER THAN ETHER % SOLIDS BY VOLUME: 35.3
V.O.C.: 4.14 lb/gl

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY:

D LABEL, FLAMMABLE, LESS THAN 100°F.

FLASH POINT : 10°F METHOD USED: SETA FLASH
FLAMMABLE LIMITS IN AIR BY VOLUME-LOWER: 1.0

EXTINGUISHING MEDIA:
FOAM, DRY CHEMICAL OR CARBON DIOXIDE EXTINGUISHERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
EXTREMELY FLAMMABLE. VAPORS MAY SPREAD LONG DISTANCES AND IGNITE EXPLOSIVELY. KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND OPEN FLAMES. CLOSED CONTAINERS MAY EXPLODE OR RUPTURE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY TO HOT SURFACES. AVOID BREATHING GASES, VAPORS, FUMES OR DECOMPOSITION PRODUCTS DURING A FIRE. OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTONS MAY NOT BE IMMEDIATELY APPARENT. OBTAIN MEDICAL ATTENTION.

SPECIAL FIREFIGHTING PROCEDURES:
KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, SPARKS, ELECTRICAL EQUIPMENT AND OPEN FLAME. AVOID BREATHING GASES, VAPORS, FUMES OR DECOMPOSITION PRODUCTS DURING A FIRE. PERSONNEL INVOLVED IN A FIRE SHOULD WEAR FULL PROTECTIVE EQUIPMENT, INCLUDING SELF-CONTAINED RESPIRATORY EQUIPMENT. WATER SPRAY MAY BE USED TO COOL UNRUPTURED CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: SEE SECTION II

INHALATION HEALTH RISKS AND SYMPTOMS OF ACUTE EXPOSURE:
INHALATION OF VAPORS OR SPRAY MISTS CAN CAUSE IRRITATION OF THE RESPIRATORY TRACT OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS OR COMA. OVEREXPOSURE TO VAPORS OR SPRAY MISTS CAN CAUSE EYE AND SKIN IRRITATION.

EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
EYE CONTACT WITH LIQUID MAY BE SEVERELY IRRITATING AND MAY CAUSE CORNEAL DAMAGE IF THE EYE IS NOT FLUSHED OUT IMMEDIATELY WITH WATER.

SKIN CONTACT HEALTH RISKS AND SYMTOMS OF EXPOSURE:
BRIEF CONTACT WITH SKIN MAY CAUSE SLIGHT TO MODERATE IRRITATION AND POSSIBLY DRYING OF THE SKIN.

REPEATED OR PROLONGED SKIN CONTACT MAY CAUSE DRYING AND DEFATTING OF THE SKIN, WHICH MAY LEAD TO DERMATITIS.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:
MAY BE HARMFUL IF SWALLOWED. SWALLOWING MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, DIARRHEA, VOMITING AND POSSIBLY NARCOSIS. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE PNEUMONITIS, WHICH CAN BE FATAL.

CHRONIC HEALTH HAZARDS:
EATED OR PROLONGED OCCUPATIONAL EXPOSURE TO VAPORS FROM SOLVENT(S) CONTAINED IN THIS PRODUCT MAY AFFECT THE CENTRAL NERVOUS SYSTEM AND CAUSE RESPIRATORY IRRITATION, RESULTING IN POSSIBLE LUNG DAMAGE, AND MAY CAUSE LIVER AND KIDNEY DAMAGE.

NOTE: A CASE EFFECT SHOWED ACTIVE LIVER & KIDNEY DYSFUNCTION AT EXTREMELY HIGH LEVELS OF EXPOSURE TO XYLENE AND TOLUENE.

USE: REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

CARCINOGENICITY:

THIS PRODUCT CONTAINS ETHYLBENZENE, CLASSIFIED BY IARC AS A GROUP 2B CARCINOGEN - POSSIBLY CARCINOGENIC TO HUMANS. THERE IS INADEQUATE EVIDENCE IN HUMANS BUT SUFFICIENT EVIDENCE IN EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF ETHYLBENZENE.

THIS MATERIAL CONTAINS CARBON BLACK. EPIDEMIOLOGICAL STUDIES OF WORKERS IN THE CARBON BLACK PRODUCING INDUSTRIES OF NORTH AMERICA AND WESTERN EUROPE SHOW NO EVIDENCE OF CLINICALLY SIGNIFICANT ADVERSE HEALTH EFFECTS DUE TO OCCUPATIONAL EXPOSURE TO CARBON BLACK. IN ITS MONOGRAM VOLUME 65, ISSUED APRIL 1996, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) REEVALUATED CARBON BLACK AND CONCLUDED THAT "THERE IS INADEQUATE EVIDENCE IN HUMANS FOR THE CARCINOGENICITY OF CARBON BLACK".
CARBON BLACKS SUPPLIED BY OUR DOMESTIC SUPPLIERS CONTAIN LESS THAN 0.1% OF ADSORBED PAH'S (POLYNUCLEAR AROMATIC HYDROCARBONS). IN NON-ADSORBED FORM, SOME PAH'S HAVE BEEN FOUND TO BE CARCINOGENS IN ANIMAL STUDIES. NO CARCINOGENIC EFFECT, HOWEVER, HAS BEEN OBSERVED IN HUMANS DUE TO CARBON BLACK. CHRONIC INFLAMMATION, LUNG FIBROSIS AND LUNG TUMORS HAVE BEEN OBSERVED IN SOME RATS EXPERIMENTALLY EXPOSED, FOR LONG PERIODS OF TIME, TO EXCESSIVE CONCENTRATIONS OF CARBON BLACK AND SEVERAL OTHER INSOLUBLE FINE DUST PARTICLES. TUMORS HAVE NOT BEEN OBSERVED IN OTHER ANIMAL SPECIES (i.e., MOUSE AND HAMSTER) UNDER SIMILAR CIRCUMSTANCES AND STUDY CONDITIONS. MANY RESEARCHERS CONDUCTING RAT INHALATION STUDIES BELIEVE THAT THESE EFFECTS MOST LIKELY RESULT FROM THE MASSIVE ACCUMULATION OF SMALL DUST PARTICLES IN THE LUNG WHICH OVERWHELM THE NATURAL LUNG CLEARANCE MECHANISMS, KNOWN AS "LUNG OVERLOAD" PHENOMENON, RATHER THAN FROM A SPECIFIC CHEMICAL EFFECT OF THE DUST PARTICLES IN THE LUNG.
MANY INHALATION TOXICOLOGISTS BELIEVE THAT THE TUMOR RESPONSE OBSERVED IN THE REFERENCED RAT STUDIES IS SPECIES SPECIFIC DOES NOT RELATE TO HUMAN EXPOSURE. HOWEVER, THE IARC EVALUATION IN MONOGRAPH 65 CONCLUDED THAT "THERE IS SUFFICIENT EVIDENCE IN EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF CARBON BLACK". BASED ON THIS EVALUATION, ALONG WITH THEIR EVALUATION OF INADEQUATE CARCINOGENICITY IN HUMANS, IARC'S OVERALL EVALUATION IS THAT "CARBON BLACK IS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B)".
CARBON BLACK HAS NOT BEEN LISTED AS A CARCINOGEN BY NTP (NATIONAL TOXICOLOGY PROGRAM) OR OSHA (OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION). NIOSH (THE NATIONAL INSTITUTE OF SAFETY AND HEALTH) CRITERIA DOCUMENT ON CARBON BLACK RECOMMENDS THAT ONLY CARBON BLACKS WITH PAH LEVELS GREATER THAN 0.1% BE CONSIDERED SUSPECT CARCINOGENS.

EMERGENCY FIRST AID PROCEDURES:

INHALATION: REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE MOUTH-TO-MOUTH RESUSCITATION AND KEEP WARM AND QUIET. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL HELP IMMEDIATELY. SPLASH (EYES): FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF WATER FOR 15 MINUTES AND TAKE TO A PHYSICIAN FOR DEFINITIVE MEDICAL TREATMENT. SPLASH (SKIN): REMOVE CONTAMINATED CLOTHING AND WASH AFFECTED AREA WITH SOAP AND WATER. IF IRRITATION PERSISTS, SEE A PHYSICIAN.

IF SWALLOWED, CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY AND GET MEDICAL HELP. DO NOT INDUCE VOMITING UNLESS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

EXPOSURE MAY AGGRAVATE PRE-EXISTING SKIN, EYE AND RESPIRATORY DISORDERS.

SECTION VI - REACTIVITY DATA

STABILITY:

BLE

CONDITIONS TO AVOID:

EXCESSIVE HEAT, SPARKS AND OPEN FLAME.

INCOMPATIBILITY (MATERIALS TO AVOID):

AVOID STRONG OXIDIZING AGENTS, STRONG ACIDS, STRONG ALKALINE MATERIALS AND BASES.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

DECOMPOSITION MAY PRODUCE SMOKE, ACRID FUMES, CARBON DIOXIDE AND/OR CARBON MONOXIDE, AND POSSIBLY OTHER TOXIC VAPORS.

DECOMPOSITION MAY ALSO PRODUCE TOXIC ACRYLIC MONOMER.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES AND ELECTRICAL, STATIC OR FRICTION SPARKS). AVOID BREATHING VAPORS. WEAR APPROPRIATE PROTECTIVE EQUIPMENT. VENTILATE AREA. ADD INERT ABSORBENT AND REMOVE TO APPROPRIATE CONTAINER FOR DISPOSAL WITH NON-SPARKING TOOLS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATER AND SOIL.

WASTE DISPOSAL METHOD:

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE CLOSED CONTAINERS.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION:

PRODUCT IS APPLIED BY BRUSH, ROLLER COAT, OR DIP IN OUTDOOR OR OPEN AREAS WITH UNRESTRICTED VENTILATION, AND WHERE THE TLV'S DO NOT EXCEED THOSE SHOWN IN SECTION II, RESPIRATORY EQUIPMENT MAY NOT BE NECESSARY. IF EYE WATERING, HEADACHES OR DIZZINESS ARE EXPERIENCED WEAR RESPIRATORY PROTECTION (NIOSH TC23 RESPIRATOR OR EQUIVALENT) OR LEAVE AREA. IF PRODUCT IS APPLIED BY SPRAY APPLICATION, A NIOSH APPROVED MECHANICAL FILTER RESPIRATOR DESIGNED TO REMOVE AIRBORNE PARTICLES OF OVERSPRAY DURING APPLICATION SHOULD BE WORN. IN RESTRICTED VENTILATION AREAS, WHERE THE TLV'S CAN EXCEED THOSE SHOWN IN SECTION II, A NIOSH APPROVED RESPIRATOR WITH CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICULATE AND VAPORS SHOULD BE WORN. IN CONFINED AREAS, USE A NIOSH APPROVED AIRLINE RESPIRATOR OR HOOD.

VENTILATION:

SOLVENT VAPORS ARE HEAVIER THAN AIR AND TEND TO ACCUMULATE AT LOWER LEVELS ALONG THE FLOOR. VAPORS MAY SPREAD LONG DISTANCES AND MAY CAUSE A FLASH FIRE. PREVENT BUILD-UP OF VAPORS. ELIMINATE ANY SOURCE OF IGNITION DURING USE AND UNTIL VAPORS ARE GONE. PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP TLV OF MOST HAZARDOUS INGREDIENT IN SECTION II BELOW ACCEPTABLE LIMIT, LEL IN SECTION IV BELOW STATED LIMIT, AND TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.

PROTECTIVE GLOVES:

SOLVENT RESISTANT GLOVES ARE REQUIRED FOR PROLONGED OR REPEATED CONTACT WITH LIQUID.

EYE PROTECTION:

IF A SPLASHING HAZARD EXISTS OR IF THERE IS POTENTIAL EYE CONTACT, WEAR SAFETY EYEWEAR SUCH AS CHEMICAL GOGGLES OR FACE SHIELDS TO PREVENT CONTACT OF LIQUID WITH EYES. EYE FLUSHING EQUIPMENT SHOULD BE IMMEDIATELY AVAILABLE.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR APPROPRIATE PROTECTIVE OUTERWEAR TO PROTECT AGAINST CLOTHING CONTAMINATION AND PROLONGED SKIN CONTACT. WHEN NECESSARY, WEAR CHEMICAL AND/OR SOLVENT RESISTANT BOOTS TO PROTECT FEET AND SHOES FROM CONTAMINATION. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE REUSE. DISCARD CONTAMINATED SHOES THAT CANNOT BE THOROUGHLY CLEANED BEFORE REUSE. WASH HANDS BEFORE EATING, SMOKING OR USING RESTROOM.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

DO NOT STORE ABOVE 120 DEG F. DO NOT STORE OR USE NEAR HEAT, SPARKS, OR OPEN FLAME. KEEP CONTAINERS TIGHTLY COVERED AND UPRIGHT TO PREVENT LEAKAGE. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF FLAMMABLE LIQUIDS.

OTHER PRECAUTIONS:

DANGER - EXTREMELY FLAMMABLE. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. VAPORS MAY SPREAD LONG DISTANCES AND MAY CAUSE A FLASH FIRE. PREVENT BUILDUP OF VAPORS. ELIMINATE ANY SOURCE OF IGNITION DURING USE AND UNTIL VAPORS ARE GONE. WHEN POURING/TRANSFERRING THIS MATERIAL TO ANOTHER CONTAINER OR EQUIPMENT, GROUND ALL CONTAINERS AND EQUIPMENT AS STATIC ELECTRICITY MAY IGNITE VAPORS. VAPORS HARMFUL. MAY CAUSE IRRITATION TO EYES, NOSE, THROAT, SKIN AND RESPIRATORY TRACT. PROLONGED OR REPEATED CONTACT OF LIQUID OR BREATHING OF VAPORS OR MISTS MAY CAUSE DELAYED AND SERIOUS INJURY. USE ONLY WITH ADEQUATE VENTILATION. AVOID BREATHING VAPORS OR SPRAY MIST. AVOID CONTACT WITH EYES AND SKIN. DO NOT TAKE INTERNALLY. DO NOT SAND, FLAME CUT, BRAZE OR WELD DRY COATING WITHOUT A NIOSH APPROVED REPIRATOR OR SUFFICIENT VENTILATION. DUST FROM OVERSPRAY OR SANDING THE PAINT FILM IS POTENTIALLY IGNITABLE (EXPOSIVE) WHEN SUSPENDED IN AIR AND SHOULD BE KEPT AWAY FROM HEAT, SPARKS, FLAME, STATIC ELECTRICITY OR ANY OTHER TYPE OF IGNITION SOURCES.
NOTICE: REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OV EREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING CONTENTS MAY BE HARMFUL OR FATAL.

SPECIAL PRECAUTIONS:

N/A

MISCELLANEOUS PRECAUTIONS:

WARNING - EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUE, INCLUDING FLAMMABLE OR EXPLOSIVE VAPORS. DO NOT CUT, PUNCTURE OR WELD ON OR NEAR CONTAINER. ALL LABEL WARNINGS MUST BE OBSERVED UNTIL THE CONTAINER HAS BEEN CLEANED OR RECONDITIONED.

SECTION X - DISCLAIMER

SARA 313 INFORMATION:

N/A

FOOTNOTE:

USER'S RESPONSIBILITY: THE RESPONSIBILITY TO PROVIDE A SAFE WORKPLACE REMAINS WITH THE USER. THE USER SHOULD CONSIDER THE HEALTH HAZARDS AND SAFETY INFORMATION CONTAINED HEREIN AS A GUIDE AND SHOULD TAKE THOSE PRECAUTIONS REQUIRED IN AN INDIVIDUAL OPERATION TO INSTRUCT EMPLOYEES AND DEVELOP WORK PRACTICE PROCEDURES FOR A SAFE WORK ENVIRONMENT. IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.
TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE. HOWEVER, STRATHMORE PRODUCTS, INC., ASSUMES NO LIABILITY WHATSOEVER FOR THE ACCURACY, RELIABILITY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN. FINAL DETERMINATION OF SUITABILITY OF ANY MATERIAL IS THE SOLE RESPONSIBILITY OF THE USER. SINCE THE CONDITIONS OF HANDLING AND USE ARE BEYOND OUR CONTROL, WE MAKE NO GUARANTEE OF RESULTS, AND ASSUME NO LIABILITY FOR DAMAGES INCURRED BY USE OF THIS MATERIAL. ALL MATERIALS MAY PRESENT UNKNOWN HEALTH AND SAFETY HAZARDS AND SHOULD BE USED WITH CAUTION. ALTHOUGH CERTAIN HAZARDS ARE DESCRIBED HEREIN, WE CANNOT GUARANTEE THAT THESE ARE THE ONLY HAZARDS WHICH EXIST.

ASHLAND
SAFETY DATA SHEET

Revision Date: 09/22/2008
Print Date: 1/13/2009
MSDS Number: R0000565
Version: 5.1

TOLUENE 20054

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	TOLUENE
Product code	20054
Product Use Description	SOLVENT

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid,, colourless

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. HARMFUL IF INHALED. MAY BE HARMFUL IF INHALED OR SWALLOWED. MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

Potential Health Effects

Routes of exposure

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin contact

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, drying and cracking of skin, and skin burns. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Upper respiratory tract, Skin, lung (for example, asthma-like conditions), kidney, Central nervous system, auditory system, Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, metallic taste, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, temporary changes in mood and behavior, Weakness, Lack of coordination, confusion, irregular heartbeat, coma, and death

Target Organs

Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on: central and peripheral nervous systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene., Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone., Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, mild, reversible liver effects, mild, reversible kidney effects, respiratory tract damage (nose, throat, and airways), effects on hearing,

central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, kidney damage

Carcinogenicity

This material is not expected to cause cancer in humans since it did not cause cancer in laboratory animals. This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Concentration
TOLUENE	108-88-3	>=90-<=100%

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Foam, Carbon dioxide (CO2), Dry chemical

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

Flammability Class for Flammable Liquids

Flammable Liquid Class IB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at

source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

Environmental precautions

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Methods for cleaning up

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77. Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering or pumping at high flow rates. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

Storage

Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatible substances. Store out of direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

TOLUENE		108-88-3
ACGIH	time weighted average	20 ppm
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	375 mg/m3
NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	560 mg/m3
OSHA Z2	time weighted average	200 ppm
OSHA Z2	Ceiling Limit Value:	300 ppm
OSHA Z2	Maximum concentration:	500 ppm

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s). Explosion-proof ventilation system is acceptable.

Eye protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin and body protection

To prevent repeated or prolonged skin contact, wear impervious clothing and boots.
Wear resistant gloves such as:
polyvinyl alcohol

Respiratory protection

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH-approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	Liquid
Colour	colourless
Odour	hydrocarbon-like
Boiling point/boiling range	110.60 °C / 231.1 °F
Melting point/range	-138.8 °F / -94.9 °C
pH	No data
Flash point	39.99 °F / 4.44 °C, Closed Cup
Evaporation rate	2.00 (N-Butyl Acetate)
Explosion limits	1.27 %(V) 7 %(V)
Vapour pressure	3.78 kPa @ 77 °F / 25 °C
Vapour density	3.1 (AIR=1)
Density	0.87 g/cm3 @ 68.00 °F / 20.00 °C 7.25 lb/gal @ 68 °F / 20 °C
Solubility	negligible in water
Partition coefficient: n-octanol/water	No data
log Pow	2.73
Autoignition temperature	896 °F / 480 °C

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid

Incompatible products
Strong acids, Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

TOLUENE	LD 50 Rat: 2,600 - 7,500 mg/kg

Acute inhalation toxicity

TOLUENE	LC 50 Rat: 8000 ppm, 4 h

Acute dermal toxicity

TOLUENE	LD 50 Rabbit: 12,124 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic toxicity

Acute and Prolonged Toxicity to Fish
No data
Acute Toxicity to Aquatic Invertebrates
No data

Environmental fate and pathways
No data

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Destroy by incineration in accordance with applicable regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

IMDG:
UN1294, TOLUENE 3, II
IATA_P:

UN1294, Toluene 3, II
IATA_C:
UN1294, Toluene 3, II
CFR_ROAD:
UN1294, Toluene 3, II
CFR_RAIL:
UN1294, Toluene 3, II
CFR_INWTR:
UN1294, Toluene 3, II
IMDG_ROAD:
UN1294, TOLUENE 3, II
IMDG_RAIL:
UN1294, TOLUENE 3, II

Dangerous goods descriptions (if indicated above) may not reflect package size, quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65
WARNING! This product contains a chemical known in the State of California to cause cancer.
BENZENE

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.
TOLUENE
BENZENE

WARNING! This product contains a chemical known in the State of California to cause cancer.
BENZENE

SARA Hazard Classification Fire Hazard
Acute Health Hazard

SARA 313 Component(s)

TOLUENE	108-88-3	0

TOLUENE	108-88-3	99%

Reportable quantity - Product
US. EPA CERCLA Hazardous Substances (40 CFR 302) 1000 lbs

Reportable quantity - Components
TOLUENE 108-88-3 1000 lbs

	Health	Flammability	Reactivity	Other
HMIS	1*	3	0	
NFPA	2	3	0	

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

C

FLOW SAMPLING EQUIPMENT

CALIBRATION

INFORMATION

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

Pitot Tube Calibration Measurements

Pitot Tube Identification Number: KA-SSIII

Date Calibrated: 4/1/10

Pitot Tube Assembly Level: Yes ☑ No ☐

Pitot Tube Openings Damaged: Yes ☐ No ☑; If yes, please explain: _____

Dt_A = 0.371 in. (Dt_A = 0.1875 - 0.3750 in.)

Dt_B = 0.372 in. (Dt_B = 0.1875 - 0.3750 in.)

α_A = 3.0° (<10°) α_B = 2.0° (<10°)

β_A = 2.0° (<5°) β_B = 3.0° (<5°)

γ = 1.0°, θ = 1.0°,

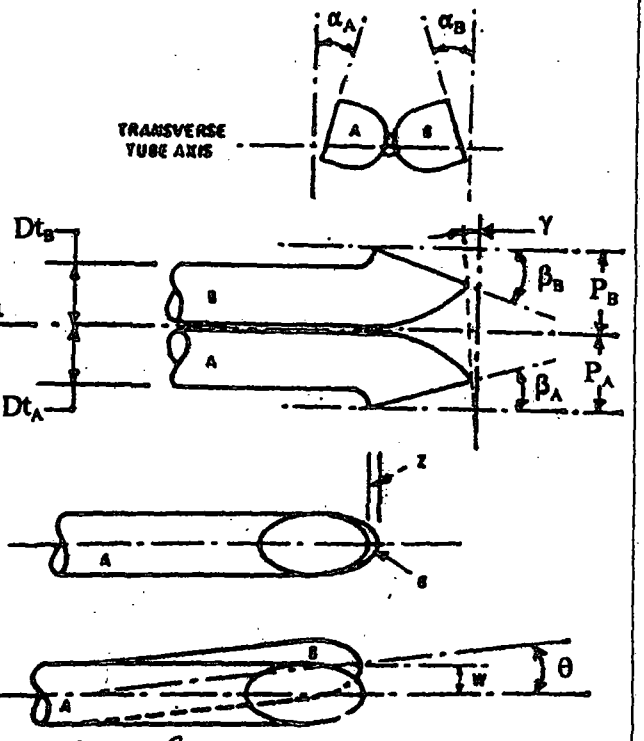
P_A = 0.467 (P_A = 1.05 Dt to 1.50 Dt)

P_B = 0.466 (P_B = 1.05 Dt to 1.50 Dt)

$P_A + P_B = A$ = 0.933 [A = 2x(1.05 Dt to 1.50 Dt)]

Z = A SIN γ = 0.016 in. (<0.125 in.)

W = A SIN θ = 0.016 in. (<0.031 in.)



Comments: All measurements O.K.

Calibration required? Yes ☐ No ☐

Calibrated by: _____

Post Test Thermocouple Calibration

Date: 9/20/10

Plant Name: Exteria Building Products, LLC

Location: Miami, FL

Source: RTO Inlet + Outlet

Thermocouple Readout No.	KA-9
Umbilical Cord No.	KAK-100
Switch Box No.	KA-9
Thermocouple No.	KAK-60
Average Stack Temperature °F	≈ 95° in, ≈ 190° out
* Observed Mercury in Glass (ASTM) °F	88°
Observed Thermocouple Reading °F	88°

* Per Alternative Method 2 Thermocouple Calibration Procedure (ALT-011)

Percent Difference $\frac{(\text{ASTM} + 460) - (\text{Thermo} + 460) \times 100}{(\text{ASTM} + 460)} =$ 0%

Tolerance ± 2 °F

Signature:

KOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES

KOOGLER & ASSOCIATES, Inc.
THERMOCOUPLE CALIBRATION

"K" TYPE											
	Ice			Ambient			Hot Oil			Average	Average
Probe ID	NIST (F°)	Probe (F°)	% Δ	NIST (F°)	Probe (F°)	% Δ	NIST (F°)	Probe (F°)	% Δ	% Δ	Δ (F°)
KAK-5	36	37	-2.8	74	73	1.4	406	404	0.5	-0.3	-0.3
KAK-8	38	39	-2.6	74	74	0.0	405	406	-0.2	-1.0	-1.0
KAK-9	36	37	-2.8	74	73	1.4	406	408	-0.5	-0.6	-0.6
KAK-10	36	36	0.0	92	91	1.1	405	407	-0.5	0.2	0.2
KAK-11	33	32	3.0	92	91	1.1	402	402	0.0	1.4	1.4
KAK-14	34	34	0.0	85	84	1.2	395	395	0.0	0.4	0.4
KAK-20	34	34	0.0	85	84	1.2	399	400	-0.3	0.3	0.3
KAK-35	36	36	0.0	74	74	0.0	401	401	0.0	0.0	0.0
KAK-36	34	36	-5.9	86	84	2.3	402	406	-1.0	-1.5	-1.5
KAK-50	36	37	-2.8	86	86	0.0	401	401	0.0	-0.9	-0.9
KAK-51	36	37	-2.8	74	72	2.7	403	404	-0.2	-0.1	-0.1
KAK-52	35	37	-5.7	86	85	1.2	401	400	0.2	-1.4	-1.4
KAK-60	36	36	0.0	86	85	1.2	404	404	0.0	0.4	0.4
KAK-61	36	37	-2.8	86	85	1.2	399	401	-0.5	-0.7	-0.7
KAK-62	34	35	-2.9	86	85	1.2	400	402	-0.5	-0.8	-0.8
KAK-63A	36	37	-2.8	85	84	1.2	398	398	0.0	-0.5	-0.5
KAK-63	36	36	0.0	84	84	0.0	401	402	-0.2	-0.1	-0.1
KAK-64	36	37	-2.8	85	84	1.2	400	401	-0.3	-0.6	-0.6
KAK-65	36	34	5.6	86	86	0.0	397	399	-0.5	1.7	1.7
KAK-70	36	36	0.0	85	85	0.0	400	401	-0.3	-0.1	-0.1
KAK-71	36	37	-2.8	84	84	0.0	394	395	-0.3	-1.0	-1.0
KAK-72A	34	34	0.0	86	85	1.2	394	393	0.3	0.5	0.5
KAK-72	34	33	2.9	86	85	1.2	393	393	0.0	1.4	1.4
KAK-75	34	34	0.0	86	85	1.2	400	401	-0.3	0.3	0.3
KAK-78	36	36	0.0	86	86	0.0	396	397	-0.3	-0.1	-0.1
KAK-80	36	36	0.0	86	85	1.2	396	396	0.0	0.4	0.4
KAK-111	36	36	0.0	84	83	1.2	397	398	-0.3	0.3	0.3
KAK-110	34	33	2.9	85	84	1.2	401	403	-0.5	1.2	1.2
KAK-112	36	37	-2.8	85	85	0.0	397	398	-0.3	-1.0	-1.0
Secondary Standard Thermocouple with Hand Held OMEGA (HH 509 R) s/n 51001062											
KAK # 1	35	37	-5.7	84	83	1.2	406	408	-0.5	-1.7	-1.7
KAK # 2	36	36	0.0	84	84	0.0	402	402	0.0	0.0	0.0

DATE: 6/23-24/2009
TESTER: J. Langston, C. Enwall

FIELD DATA SHEET: **POST-TEST DRY GAS METER CALIBRATION USING CRITICAL ORIFICES**

Koogler & Associates
Environmental Services

1) Select one critical orifice to calibrate the dry gas meter which approximates the test average delta H range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below.

COMPANY: Exteria Building Products, LLC
SOURCE: RTO Outlet
TEST DATE: 9/20/10
METER Y: 0.995
AVG. DELTA H: 1.59

METER SERIAL #: KA9
CRITICAL ORIFICE SERIAL #: 1376

BAROMETRIC PRESSURE (in Hg):	INITIAL	FINAL
	30.28	30.28

RUN	ORIFICE NO.	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	TEMPERATURES °F ORIFICE	TEMPERATURES °F DGM INITIAL	TEMPERATURES °F DGM FINAL	ELAPSED TIME (MIN)	DGM ΔH ($in H_2O$)
1	17	0.4452	18	624.972	632.417	80	77.9	79.7	13	0.94
2	17	0.4452	18	632.417	638.755	80	79.7	80.9	11	0.94
3	17	0.4452	18	638.755	648.556	80	80.9	~~80.~~ RM 82.2	17	0.94

Test Conducted by: Ryan Meyer
Signature: [signature]
Date: 9/20/10

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

POST-TEST DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

Koogler & Associates
Environmental Services

1) Select one critical orifice to calibrate the dry gas meter which represents the observed operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below, other columns are automatically calculated.

COMPANY: Exteria Building Products, LLC
SOURCE: RTO Outlet
DATE: 9/20/10
PRETEST Y: 0.995

METER SERIAL #: KA9
CRITICAL ORIFICE SERIAL #: 1376

BAROMETRIC PRESSURE (in Hg):	INITIAL	FINAL	AVG (P_{bar})
	30.28	30.28	30.28

RUN NO.	ORIFICE NO.	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F ORIFICE	TEMPERATURES °F DGM INITIAL	TEMPERATURES °F DGM FINAL	TEMPERATURES °F DGM AVG	ELAPSED TIME (MIN)	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	(4) $\Delta H_@$
1	17	0.4452	18	624.972	632.417	7.445	80	77.9	79.7	79	13.0	0.94	7.40	7.54	1.019	1.570
2	17	0.4452	18	632.417	638.755	6.338	80	79.7	80.9	80	11.0	0.94	6.28	6.38	1.016	1.570
3	17	0.4452	18	638.755	648.556	9.801	80	80.9	82.2	82	17.0	0.94	9.69	9.86	1.018	1.570
														AVG =	1.018	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:
The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.018
AVERAGE DELTA Y= 0.023
DELTA Y LIMIT = 0.05
IS TEST WITHIN 5%? YES

(1) $$V_m(std) = K_1 V_m Y \left[\frac{P_{bar} + \left(\Delta H / 136\right)}{T_m} \right]$$

(2) $$V_{cr}(std) = K' \left[\frac{P_{bar}\,\theta}{\sqrt{T_{amb}}} \right]$$

(3) $$Y = \frac{V_{cr}(std)}{V_m(std)}$$

(4) $$\Delta H_@ = \left(\frac{0.75 * \theta}{V_{CR}(sdt)} \right)^2 * \Delta H$$

V_m(std) = Net volume of gas sample passed through DGM, corrected to standard conditions.
K_1 = 17.64 °R/in. Hg
Y = DGM calibration factor
V_{cr}(std) = Volume of gas sample passed through the critical orifice, corrected to standard conditions.
Pbar = Barometric pressure at the sampling site (in. Hg).
ΔH = Orifice pressure differential (in. H2O).
θ = Total smapling time (min.)
T_m = Absolute DGM avg. temperature °R
T_{amb} = Absolute ambient temperature °R
K' = Average K' factor from Critical Orifice Calibration

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

Koogler & Associates
Environmental Services

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record data and information in the GREEN cells, YELLOW cells are calculated.

DATE: 2/18/2010 | METER SERIAL #: KA-9 | BAROMETRIC PRESSURE (in Hg): INITIAL 30.18, FINAL 30.18, AVG (P_{bar}) 30.18

METER PART #: KA-9 | CRITICAL ORIFICE SET SERIAL #: 1375

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F Orifice	TEMPERATURES °F DGM INITIAL	TEMPERATURES °F DGM FINAL	TEMPERATURES °F DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
17	1	0.4452	19	788.009	793.786	5.777	69	69	70	69.5	10.00	0.94	5.8251	5.8435	1.003		1.56
	2	0.4452	19	793.786	799.454	5.668	68.5	70	70	70	9.80	0.94	5.7098	5.7294	1.003		1.56
	3	0.4452	19	799.454	804.664	5.210	68.5	70	70	70	9.00	0.94	5.2484	5.2616	1.003		1.56
														AVG =	1.003	0.77	
22	1	0.5836	19	809.624	814.978	5.354	68	70	70	70	7.00	1.65	5.4028	5.3671	0.993		1.59
	2	0.5836	19	814.978	820.325	5.347	68	70	71	70.5	7.00	1.65	5.3906	5.3671	0.996		1.59
	3	0.5836	19	820.325	825.681	5.356	68	71	71	71	7.00	1.65	5.3946	5.3671	0.995		1.59
														AVG =	0.995	-0.07	
26	1	0.7005	19	831.080	835.696	4.616	68	71	71	71	5.00	2.4	4.6577	4.6016	0.988		1.61
	2	0.7005	19	835.696	841.228	5.532	68	71	71	71	6.00	2.4	5.5820	5.5219	0.989		1.61
	3	0.7005	19	841.228	845.844	4.616	68	71	71	71	5.00	2.4	4.6577	4.6016	0.988		1.61
														AVG =	0.988	-0.70	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 0.995

AVERAGE $\Delta H_@$ = 1.59

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions
K1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)
T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions
T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)
K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr(std)}}\right) \Delta H \left(\frac{V_{m(std)}}{V_m}\right)$$

D

CALIBRATION GAS CERTIFICATIONS

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

Airgas

CERTIFICATE OF BATCH ANALYSIS

AIR - ULTRA ZERO

Part Number:	Al UZ15A	Reference Number:	55-110554182-1
Cylinder Analyzed:	R1031090 Y	Cylinder Volume:	146 Cubic Feet
Laboratory:	ASO - Jacksonville - FL	Cylinder Pressure:	2000 PSIG
Analysis Date:	Nov 20, 2008	Valve Outlet:	590
Lot #:	55-110554182-1		

ANALYTICAL RESULTS

Component	Requested Purity		Certified Concentration
CO + CO2	< 1 PPM		0.1 PPM
THC	< 0.1 PPM	<LDL	0.1 PPM
Percent Oxygen	20-22 %		20.00 %
Moisture	< 2 PPM		0.1 PPM

Cylinders in Batch:

CC 216820, CC 51653, CC- 19887, CC182528, CC194805, CC194919, CC201524, CC220983, SG868282NB, SGC553537

Notes:

Impurities verified against analytical standards traceable to NIST by weight and/or analysis.

Signature On File

QA Approval

Liquid Technology Corporation

Industry Leader in Specialty Gases, Equipment and Service

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Koogler & Associates (Gainesville, Florida)
Date	May 27, 2008
Delivery Receipt	DR-21700
Gas Standard	100.0 ppm Methane, 100.0 ppm Propane/N2 - EPA PROTOCOL
Final Analysis Date	May 22, 2008
Expiration Date	May 22, 2011
Component	Methane, Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Methane: 103.8 ppm +/- 1.0 ppm

Propane: 100.5 ppm +/- 1.0 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-125496	CC-166582
Concentration:	91.0 ppm Methane/N2	103.2 ppm Propane/Nitrogen
Expiration Date:	March 04, 2012	May 02, 2012

Certification Instrumentation

Component:	Methane	Propane
Make/Model:	HP5890-II	HP-5890II
Serial Number:	3336A59393	3336A59393
Principal of Measurement:	GC-FID	GC-FID
Last Calibration:	May 08, 2008	May 02, 2008

Cylinder Data

Cylinder Serial Number:	CC-56231	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Date: May 27, 2008

Unmatched Excellence

2564 Pemberton Drive ~ Apopka, Florida 32703 ~ Phone (407)-292-2990 ~ Fax (407)-292-3313
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Liquid Technology Corporation

Industry Leader in Specialty Gases, Equipment and Service

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Koogler & Associates (Gainesville, Florida)
Date	May 27, 2008
Delivery Receipt	DR-21700
Gas Standard	50.0 ppm Methane, 50.0 ppm Propane/N2 - EPA PROTOCOL
Final Analysis Date	May 22, 2008
Expiration Date	May 22, 2011
Component	Methane, Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Methane: 52.3 ppm +/- 0.52 ppm

Propane: 49.9 ppm +/- 0.49 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-125480	CC-166570
Concentration:	49.5 ppm Methane/N2	50.92 ppm Propane/Nitrogen
Expiration Date:	March 04, 2012	June 17, 2009

Certification Instrumentation

Component:	Methane	Propane
Make/Model:	HP5890-II	HP-5890II
Serial Number:	3336A59393	3336A59393
Principal of Measurement:	GC-FID	GC-FID
Last Calibration:	May 08, 2008	May 02, 2008

Cylinder Data

Cylinder Serial Number:	CC-165357	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Date: May 27, 2008

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Certificate of Analysis
- EPA PROTOCOL GAS -

Customer	Koogler & Associates (Gainesville, Florida)
Date	May 27, 2008
Delivery Receipt	DR-21700
Gas Standard	10.0 ppm Methane, 10.0 ppm Propane/N2 - EPA PROTOCOL
Final Analysis Date	May 22, 2008
Expiration Date	May 22, 2011
Component	Methane, Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**
EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Methane: 10.6 ppm +/- 0.10 ppm
Propane: 9.97 ppm +/- 0.09 ppm
Nitrogen: Balance

Reference Standards:

SRM/GMIS:	1659a	1666b
Cylinder Number:	FF-28598	XF-003868B
Concentration:	9.863 ppm Methane/N2	9.83 ppm Propane/Nitrogen
Expiration Date:	April 01, 2009	December 01, 2009

Certification Instrumentation

Component:	Methane	Propane
Make/Model:	HP5890-II	HP-5890II
Serial Number:	3336A59393	3336A59393
Principal of Measurement:	GC-FID	GC-FID
Last Calibration:	May 08, 2008	May 02, 2008

Cylinder Data

Cylinder Serial Number:	CC-56671	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:
Date: May 27, 2008

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Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Koogler & Associates (Gainesville, Florida)
Date	May 27, 2008
Delivery Receipt	DR-21700
Gas Standard	500.0 ppm CO, 500.0 ppm Propane/Nitrogen-EPA PROTOCOL
Final Analysis Date	May 27, 2008
Expiration Date	May 27, 2011
Components	Carbon Monoxide, Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Replicate Concentrations

Carbon Monoxide: 510.5 ppm +/- 5.1 ppm

Propane: 513.4 ppm +/- 5.1 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS/GMIS	GMIS
Cylinder Number:	CC-166528/CC-115896	CC-166431
Concentration:	496.3 ppm CO/755.8 ppm CO/N2	494.8 ppm Propane/Nitrogen
Expiration Date	04/06/09 - 08/11/09	05/02/12

Certification Instrumentation

Component:	Carbon Monoxide	Propane
Make/Model:	Nicolet - NEXUS 470	HP5890 -II
Serial Number:	AEP990001$4	3336A59393
Principal of Measurement:	FTIR	GC (FID)
Last Calibration:	May 01, 2008	May 02, 2008

Cylinder Data

Cylinder Serial Number:	CC-92919	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Date: May 27, 2008

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Liquid Technology Corporation

Industry Leader in Specialty Gases, Equipment and Service

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Koogler & Associates (Gainesville, Florida)
Date	October 30, 2008
Delivery Receipt	DR-22922
Gas Standard	1000 ppm Propane, 1000 ppm CO/Nitrogen - EPA PROTOCOL
Final Analysis Date	October 30, 2008
Expiration Date	October 30, 2011
Component	Propane, Carbon Monoxide
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Reported Concentrations

Propane: 1017.0 ppm +/- 10 ppm

Carbon Monoxide: 1002.1 ppm +/- 10 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-231417	CC-159055
Concentration:	1003.9 ppm C3H8/Nitrogen	999.5 ppm CO/Nitrogen
Expiration Date:	04/07/10	08/18/09

Certification Instrumentation

Component:	Propane	Carbon Monoxide
Make/Model:	HP5890-II	Nicolet - NEXUS 470
Serial Number:	3336A59393	AEP99000154
Principal of Measurement:	GC-FID	FTIR
Last Calibration:	October 02, 2008	October 23, 2008

Cylinder Data

Cylinder Serial Number:	CC-251816	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by:

Date: October 30, 2008

Unmatched Excellence

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LIQUID TECHNOLOGY CORPORATION

"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Koogler & Associates (Gainesville, FL)
Date	May 25, 2010
Delivery Receipt	DR-29409
Gas Standard	1500 ppm CO, 3000 ppm Propane/Nitrogen-EPA PROTOCOL
Final Analysis Date	May 25, 2010
Expiration Date	May 25, 2013
Components	Carbon Monoxide, Propane
Balance Gas	Nitrogen

Analytical Data: **DO NOT USE BELOW 150 psig**

EPA Protocol, Section No. 2.2, Procedure G-1

Replicate Concentrations

Carbon Monoxide: 1470 ppm +/- 14 ppm

Propane: 2935 ppm +/- 29 ppm

Nitrogen: Balance

Reference Standards:

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-166608	CC-166425
Concentration:	1539.7 ppm CO	2493.7 ppm C3H8
Expiration Date	01/12/12	11/30/11

Certification Instrumentation

Component:	Carbon Monoxide	Propane
Make/Model:	Nicolet - NEXUS 470	Agilent 7890A
Serial Number:	AEP99000154	CN10736166
Principal of Measurement:	FTIR	GC (FID)
Last Calibration:	May 06, 2010	April 26, 2010

Cylinder Data

Cylinder Serial Number:	CC-185119	Cylinder Outlet:	CGA 350
Cylinder Volume:	140 Cubic Feet	Cylinder Pressure:	2000 psig, 70°F

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-97/121.

Certified by: Mike Duncan

Mike Duncan

E

PROJECT PARTICIPANTS

KOOGLER & ASSOCIATES, INC.
ENVIRONMENTAL SERVICES

PROJECT PARTICIPANTS

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Glen Haven ..... Senior Field Technician
Kyle Ulmer ..... Engineer I / Field Technician I

Exteria Building Products, LLC

Kevin Martin ..... Senior Engineer