

PREBURN

JOB # 035-S-075-1 Model Designation ARADA_FARRINGDON16

TECHNICIAN BTN

DATE: 2_16_17

RUN #: EPA3

READING INTERVAL: 10

.

Run Time: 60

Tunnel Traverse Information								
	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Pt.8
dP	0.041	0.043	0.041	0.044	0.043	0.046	0.040	0.035
Temperature	105	105	105	105	105	105	105	105

0.042

105.000

			1	2	3	4	5	
			TEMPERATURES					
ET	SCALE READING	FLUE DRAFT	LEFT SIDE	RIGHT SIDE	BACK	TOP	BOTTOM	STOVE AVG T
0	6.4	-0.067	380	411	446	580	153	394
10	5.3	-0.047	406	428	459	605	160	411.6
20	4.2	-0.046	399	418	448	598	164	405.4
30	3.6	-0.039	395	409	440	591	166	400.2
40	3.4	-0.031	397	392	440	526	167	384.4
50	2.7	-0.024	380	371	426	462	169	361.6
60	2.5	-0.025	356	349	411	411	173	340

Dilution Tunnel MW(dry): 29.00 lb/lb-mole
Dilution Tunnel MW(wet): 28.78 lb/lb-mole
Dilution Tunnel H2O: 2.00 %
Dilution Tunnel Static: -0.400 In H2O
Tunnel Area: 0.196 ft²
Pitot Tube Cp: 0.99

Tunnel Velocity: 13.91758 ft/sec.
Intial Tunnel Flow: 149.5518 scfm
Average Tunnel Flow: 152.7572 scfm

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 Date: 2/16/17

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dP	0.041	0.043	0.041	0.044	0.043	0.046	0.040	0.035
Temperature	105	105	105	105	105	105	105	105

0.042
 105.000

Tunnel Velocity:	13.918	ft/sec.
Intial Tunnel Flow:	149.55	scfm
Average Tunnel Flow	152.76	scfm

JOB #	035-S-075-1															
TECHNICIAN	BTN							ROOM TEMP (F)	69.9				BEG	MID	END	AVG
DATE:	2_16_17							BAROMETRIC					29.56	29.56	29.56	29.56
RUN #:	EPA3															
READING INTERVAL:	10															
SAMPLE BOX :	A	METER Y FACTOR:	1.01							PROBE MATERIAL:		SS				
FRONT FILTER #:	3040&3045					REAR FILTER #	REAR FILTER #:	3041								
FINAL LEAK RATE (CFM):	<0.01	@	19	IN-HG			FINAL LEAK RATE (CFM)	<0.01	@	19	IN-HG					
Run Time:	250	AMBIENT FILTER #:				3044	VOLUME	1403.742	LITERS	FUEL MOISTURE DB				19.3	%	
					FINAL LEAK RATE (CFM):	<0.01	@	19	IN-HG							
TEST START TIME:	12:53									1	2	3	4	5	6	
										TEMPERATURES						
	GAS METER	SAMPLE	TUNNEL	ORIFICE	FILTER	TUNNEL VEL	Proportional	Scale	Weight	TUNNEL	FLUE	FILTER	FB REAR	CAT	METER	AMBIENT
ET	VOLUME	RATE(FT3/MIN)	DELTA P	DELTA H	VAC	FT/SEC	Rate (%)	Weight	Chg	TEMP	TEMP	TEMP	TEMP	TEMP	TEMP	TEMP
0	0.000	0.000	0.042	0	-0.04		NA	10.7	0	90	229	72	410	672.61	75	72
10	1.386	0.139	0.042	2.01	-0.84	13.900	101	10.1	0.6	90	245	75	371	761.22	76	70
20	2.785	0.140	0.042	2.01	-1.08	13.862	101	9.4	0.7	87	239	75	345	863.72	78	70
30	4.190	0.141	0.042	2	-1.45	13.862	101	9	0.4	87	246	74	336	916.06	82	69
40	5.601	0.141	0.042	2.01	-1.51	13.850	101	8.5	0.5	86	253	74	334	993.19	85	69
50	7.014	0.141	0.042	2.02	-0.73	13.875	101	7.9	0.6	88	290	74	339	1246.55	87	69
60	8.434	0.142	0.042	2	-1.02	13.900	101	6.8	1.1	90	330	74	356	1281.97	89	69
70	9.854	0.142	0.042	2.02	-1.4	13.925	101	5.7	1.1	92	320	76	386	996.75	91	69
80	11.279	0.143	0.042	2.03	-1.58	13.938	101	4.6	1.1	93	320	76	415	985.38	92	70
90	12.706	0.143	0.042	2.02	-1.01	13.925	101	3.7	0.9	92	304	76	431	1040.25	94	70
100	14.130	0.142	0.042	2.01	-1.06	13.900	100	3.2	0.5	90	268	76	425	940.21	95	70
110	15.564	0.143	0.042	2.02	-1.48	13.900	101	2.9	0.3	90	255	75	409	958.74	95	70
120	16.993	0.143	0.042	2.01	-0.86	13.875	100	2.6	0.3	88	247	75	396	947.01	96	70
130	18.424	0.143	0.042	2.03	-0.98	13.862	100	2.3	0.3	87	240	75	389	944.75	96	70
140	19.860	0.144	0.042	2.03	-1.45	13.862	100	1.9	0.4	87	245	75	384	1045.24	97	70
150	21.292	0.143	0.042	2	-0.99	13.862	100	1.6	0.3	87	241	75	381	867.04	97	70
160	22.724	0.143	0.042	2.03	-1.05	13.862	100	1.4	0.2	87	229	74	379	927.06	97	70
170	24.163	0.144	0.042	2.02	-0.67	13.850	100	1.2	0.2	86	220	74	377	878.07	98	70
180	25.596	0.143	0.042	2.03	-1.05	13.837	100	1	0.2	85	208	74	377	808.37	98	70
190	27.029	0.143	0.042	2.04	-0.7	13.824	100	0.9	0.1	84	201	74	376	808.27	98	70
200	28.468	0.144	0.042	2.02	-1.6	13.824	100	0.7	0.2	84	198	74	375	808.93	98	70
210	29.906	0.144	0.042	2.04	-0.76	13.824	100	0.6	0.1	84	195	74	375	791.46	98	70
220	31.340	0.143	0.042	2.03	-1.32	13.824	100	0.5	0.1	84	191	74	373	764.68	98	70
230	32.777	0.144	0.042	2.03	-1.44	13.811	100	0.3	0.2	83	189	74	372	764.73	98	70
240	34.214	0.144	0.042	2.04	-0.63	13.811	100	0.2	0.1	83	187	73	371	770.54	98	70
250	35.648	0.143	0.042	2.04	-1.49	13.811	100	0	0.2	83	186	73	366	760.1	98	70

[illegible]

TEST START TIME:		12:53								1	2	3	4	5	6	
										TEMPERATURES						
	GAS METER	SAMPLE	TUNNEL	ORIFICE	FILTER	TUNNEL VEL	Proportional	Scale	Weight	TUNNEL	FLUE	FILTER	FB REAR	CAT	METER	AMBIENT
ET	VOLUME	RATE(FT3/MIN)	DELTA P	DELTA H	VAC	FT/SEC	Rate (%)	Weight	Chg	TEMP	TEMP	TEMP	TEMP	TEMP	TEMP	TEMP
	35.648		0.042	2.02		13.863	100.2			87	241				92	70

JOB #	035-S-075-1									
TECHNICIAN	BTN									
DATE:	2_16_17									
RUN #:	EPA3									
READING INTERVAL:	10									
SAMPLE BOX :	B	METER Y FACTOR:	1.002	PROBE MATERIAL:			SS			
FRONT FILTER #:	3042				REAR FILTER #:	3043				
FINAL LEAK RATE (CFM):	<0.01	@	18	IN-HG	FINAL LEAK RATE (CFM):	<0.01	@	18	IN-HG	

Run Time:

250

Firebox Delta T

33.8

							1	2	3	4	5	6		
							TEMPERATURES							
ET	GAS METER VOLUME	SAMPLE RATE(FT3/MIN)	PROPORTIONAL RATE	FLUE DRAFT	ORIFICE DELTA H	FILTER VAC	LEFT SIDE	RIGHT SIDE	FILTER	FB	FB	METER	STOVE AVG T	
										TOP	BOT			
0	0	0	NA	0	0	1	355	349	73	408	173	74	339	
10	1.367	0.137	101	-0.03	1.99	1.67	317	305	75	356	173	75	304	
20	2.750	0.138	101	-0.03	1.98	1.82	288	274	75	341	173	78	284	
30	4.132	0.138	101	-0.03	1.98	1.32	272	256	74	336	171	81	274	
40	5.522	0.139	101	-0.03	1.98	1.51	265	248	74	342	168	84	271	
50	6.914	0.139	101	-0.04	1.99	1.83	266	248	74	365	166	86	277	
60	8.308	0.139	100	-0.04	1.99	1.92	273	256	74	431	163	88	296	
70	9.711	0.140	101	-0.04	1.98	1.24	294	281	75	480	159	90	320	
80	11.115	0.140	101	-0.04	1.99	1.59	325	321	75	507	157	91	345	
90	12.518	0.140	101	-0.04	1.97	1.62	351	350	75	528	154	92	363	
100	13.927	0.141	101	-0.03	1.98	1.57	367	365	75	515	151	93	365	
110	15.334	0.141	100	-0.03	1.98	1.47	365	362	75	485	150	94	354	
120	16.742	0.141	100	-0.03	1.98	1.49	355	354	75	454	149	94	342	
130	18.154	0.141	100	-0.02	1.98	1.77	348	346	75	431	148	95	332	
140	19.564	0.141	100	-0.03	2	1.74	343	341	74	424	148	95	328	
150	20.977	0.141	100	-0.03	1.99	1.83	340	339	74	451	148	95	332	
160	22.386	0.141	100	-0.02	1.99	1.98	339	340	74	437	147	96	328	
170	23.801	0.142	100	-0.02	2	1.99	338	338	74	420	147	96	324	
180	25.212	0.141	100	-0.02	1.99	1.38	336	339	74	405	148	96	321	
190	26.627	0.142	100	-0.02	1.98	2.04	333	337	74	392	148	96	317	
200	28.040	0.141	100	-0.02	1.99	1.91	331	336	74	389	149	96	316	
210	29.453	0.141	100	-0.02	1.99	1.93	329	334	74	381	149	96	314	
220	30.866	0.141	100	-0.01	1.98	1.24	326	331	73	374	150	97	311	

Run No

[illegible]

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Ambient Sample Results:

JOB NUMBER: 035-S-075-1
TECHNICIAN: BTN
DATE: 2_16_17
RUN NUMBER: EPA3

METER Y FACTOR: 0.997

	<u>Sample Volume (L)</u>	<u>Meter Temp °F</u>	<u>ΔH</u>	<u>ΔP</u>
Start	0	79	0	0
End	1403.742	97	0	0

Total Sample Volume - Vm

Total Sample Volume - Vm

Average Sample Rate

Sample Time

Average Meter Temperature

Total Sample Volume (Standard Conditions) - Vmstd

Total Particulates

Particulate Concentration (dry-standard)

Particulate Emission Rate

SAMPLE INFORMATION	
1403.742	Liters
49.573	ft ³
0.20	ft ³ /min
250.00	Minutes
88	°F
47.047	dscf

0.2	mg
-----	----

0.000004251	grams/dscf
0.000048000	grams/hour

JOB NUMBER

035-S-075-1

RUN #

EPA3

DATE:

2_16_17

BURN RATE

0.98

KG/HR DRY

FILTER A
PARTICULATE

7.5

mg

FILTER B
PARTICULATE

7.5

mg

Total Sample Volume - Vm

Average Gas Velocity in Dilution Tunnel - vs

Average Gas Flow Rate in Dilution Tunnel - Qsd

Total Sample Volume (Standard Conditions) - Vmstd

Average Tunnel Temperature

Average Delta p

Average Gas Meter Temperature

Average Delta H

Total Time of Test

Total Particulates

Particulate Concentration (dry-standard)

Ambient Train (dry-standard)

Net (dry-standard)

Particulate Emission Rate

Total PM Emissions

Average Total PM Emissions

AVERAGE PARTICULATE

EMISSIONS RATE

% OF AVERAGE

Emissions Factor

SAMPLE A
INFORMATION

35.65

13.92

9165.43

34.17

feet/second

dscf/hour

dscf

87.2

F

0.042

92

F

2.02

in-h20

250

min

7.5

mg

0.00022

grams/dscf

0.000004251

grams/dscf

0.000215258

grams/dscf

1.97

grams/hour

8.22

grams

8.31

grams

1.99

grams/hour

98.9

2.021

g/Kg -Dry

SAMPLE B
INFORMATION

35.11

13.92

9165.43

33.46

feet/second

dscf/hour

dscf

87.2

F

0.042

91

F

1.99

in-h20

250

min

7.5

mg

0.00022

grams/dscf

0.000004251

grams/dscf

0.00021989

grams/dscf

2.02

grams/hour

8.40

grams

101.1

2.064

g/Kg -Dry