

1900 Belmont Boulevard Nashville, TN 37212-3757

phone 615-460-6670 fax 615-460-5544

February 11, 2016

Metropolitan Government of Nashville and Davidson County Metropolitan Health Department Pollution Control Division Attention: Eric McCann 311-23rd Avenue, North Nashville, Tennessee 37203

Dear Eric,

Belmont University is submitting the enclosed documents to remain in compliance with our Air Pollutant Source Operating Permit number 323-1, condition (13), as well as Air Pollutant Operating Permit number 323-2, condition (11). It is Belmont's intent to remain in full compliance with the Federal Clean Air Act 40 CFR 52, the State of Tennessee, Air Quality Regulation §1200-3-9-.02 as well as, Regulation Number 3, "New Source Review" of the Metropolitan Government of Nashville and Davidson County, Tennessee.

Enclosed you will find our *Annual Criteria Pollutant Emission Inventory Report*, with supporting calculations attached. We are also enclosing our *Hazardous Air Pollutant Emission Inventory Report* and our *Typical Ozone Season Day Emission Inventory Report*. We have also included a check in the amount of \$2,101.68 as payment of our 2015 Annual Emission Fees.

Please feel free to contact me if you have any questions regarding this information. Sincerely,

Mark W. Grones

FMS, Assistant Director

Belmont University

Nashville, Tennessee 37212-3757

CC: Henry Lacher

pany Name: Belmont University The following information is submitted in accordance with the following information is essentially correct. The following information is essentially correct. Annual The No. (Include of the following information is essentially correct.) The following information is essentially correct. Wask W. Mark.											S	Mark W. Grones	Mark V	(Rev. 10/06)	207-00-076 (Rev. 10/06)
Belmont University	2016	<u> </u>	February		tant Director	rvices, Assis	nagement Se			-	Grene	in su	ma	nature:	
Resignated Representative: Resignated Representative: Residence Residence Representative: Residence Reside		Date	Month						Titlo	correct	s essentially	formation i	that this inf	reby certify	(12) I he
Resignated Representatives Record Record Representatives Record			0.3313	4.452	6.28		0.430	=							
Part Name Belmont University Belmont Bollevard Section 10 56 290, Neasurement of Emissions Source Part No.															
Belmont University															
Provided Representative: Belmont University Belmont Services Assistant Director Natific Mark W. Grones Facilities Management Services Assistant Director The following information is submitted in accordance with Section 1.950 Ego, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control University Natification 1.950 Ego, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control", of the Metropolitan Code of Law Submitted in accordance with Section 1.950 Ego, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control", of the Metropolitan Code of Law Annual Throughput Annu															
Part Name Belmont University Belmont University Belmont University Belmont University Belmont University Belmont University Belmont Soulevard Nat W. Grones Facilities Margarent Services Assistant Director The following information is submitted in accordance with Section 1.056.290, "Measurement of Emissions", of Chapter 10.56. 7Air Follution Control Divisible, T W 37212 The following information is submitted in accordance with Section 1.056.290, "Measurement of Emissions", of Chapter 10.56. 7Air Follution Control Divisible The Metropolitan Code of Law Source Particulate Divisible															
Belmont University															
Part															
Belmont University Physical Location: 1900 Belmont Boulevard Mark W. Grones Facilities Management Services. Assistant Director No. Point Group Process Annual Throughput From No. Permit No. Permit No. Permit No. Permit No. 2 2 2* 14,191 lbs 1,999 gal No. Poss Janual Throughput From No. Permit N															
Belmont University Belmont Boulevard Nashville, TN 37212 Telephone Number: (615) 460-66: Nashville, TN 37212 Belmont Boulevard Nashville, TN 37212 Belmont Boulevard Nashville, TN 37212 Telephone Number: (615) 460-66: Nashville, TN 37212 Belmont Boulevard Nashville, TN 37212 Telephone Number: (615) 460-66: Nashville, TN 37212 Belmont Boulevard Nashville, TN 37212 Telephone Number: (615) 460-66: Nashville, TN 37212 Telephone Number: (615) 460-66															
Belmont University															
Belmont University Belmont University Belmont University Belmont University Belmont University Physical Location: 1900 Belmont Boulevard 1900 Belmont Boulevard Nashville, TN 37212 Mark W. Grones Mark W. Grones Facilities Management Services. Assistant Director The following Information is submitted in accordance with Section 10.56.290, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control", of the Metropolitan Code of Law No. Point No.															
Physical Location: Belmont University Physical Location: No. Belmont Boulevard ATT: FNIS Facilities Management Services., Assistant Director The following information is submitted in accordance with Section 10.56.290, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control Division ATT: FNIS ATT: FNIS Source No. Point No. Point No. Process No. Permit 1 1* 1 1* 1 14															
Physical Location: Belmont University Physical Location: 1900 Belmont Boulevard 1900 Be															
Physical Location: Belmont University Physical Location: 1900 Belmont Boulevard 1900 Be															
Physical Location: Source No. Permit Source No. Permit No. Permi			0.0623	0.349	1.396	0.181	0.0604		1,999 gal	191			2*	2	323-2
Physical Location: 1900 Belmont Boulevard Nashville, TN 37212 Malling Address: 1900 Belmont Boulevard Sement Services Assistant Director Submitted in accordance with Section 10.56.290, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control", of the Metropolitan Code of Law No. No. (Include Units) Physical Location: 1900 Belmont Boulevard ATT: FMS Nashville, TN 37212 Malling Address: 1900 Belmont Boulevard ATT: FMS Nashville, TN 37212 Nashville, TN 37212 Telephone Number: (615) 460-66: Yolatile Annual Fuel Usage Hours of Pullution Control", of the Metropolitan Code of Law Compounds No. (Include Units)			0.269		4.884	0.029	0.37		97.69 MMCF				*	_	323-1
Physical Location: 1900 Belmont Boulevard Nashville, TN 37212 Mailing Address: 1900 Belmont Boulevard ATT: FMS gement Services., Assistant Director s submitted in accordance with Section 10.56.290, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control", of the (10) Type and Amount of Pollutan) (8) (9) (10) Type and Amount of Pollutan)	t-Butyl Acetate	Lead	Volatile Organic Compounds		Nitrogen Dioxide	Sulfur	Particulate	Annual Hours of Operation	Annual Fuel Usage and Type (Include Units)	Annual Throughput (Include Units)	Process No.	Group No.	Point No. From Permit	Source No.	Permit No.
Physical Location: 1900 Belmont Boulevard Nashville, TN 37212 Mailing Address: 1900 Belmont Boulevard Nashville, TN 37212 Mailing Address: 1900 Belmont Boulevard ATT: FMS Nashville, TN 37212 S submitted in accordance with Section 10.56.290, "Measurement of Emissions", of Chapter 10.56. "Air Pollution Control", of the		s/Year	mitted in Ton	t of Pollutants E	and Amoun	(10) Type		(9)	(8)	(7)	(6)	(5)	(4)	(3)	(2)
Physical Location: 1900 Belmont Boulevard Nashville, TN 37212 Mailing Address: 1900 Belmont Boulevard Sement Services., Assistant Director Physical Location: 1900 Belmont Boulevard ATT: FMS ATT: FMS Nashville, TN 37212	W	de of Lav	etropolitan Co	ontrol", of the M	r Pollution Co	er 10.56. "Ai	ons", of Chapt	ment of Emissi	10.56.290, "Measurer	cordance with Section	bmitted in ac	nation is su	wing inform	The follo	
Physical Location: 1900 Belmont Boulevard Nashville, TN 37212)-6670	615) 460		Telephon			Boulevard 37212	1900 Belmont ATT: FMS Nashville, TN	800	., Assistant Director	ent Services	itative: Grones Managem	d Represen Mark W. Facilities	Designate	Owner or
	artment sion rth 13	alth Depa itrol Divis enue Nor N 3720	etro Public Hea Pollution Con 311 23rd Av Nashville, T	Me			Boulevard 37212	1900 Belmont Nashville, TN (ity	Univers	elmont		any Name:	(1) Comp
ANNUAL CR						KETOK	NVENIORY	AI EMISSION	KI IEKIA POLLUTAI	ANNUAL					

Signature: Mak M. Grones 207-00-077 (Rev. 10/06) Mark W. Grones									323-2 2 2*	323-1 1 1*	Permit Source No. Group Process No. No. From No. No. Permit	(2) (3) (4) (5) (6)	The following information is submitted in accordance with Section 10.56.290, "Measurement of Emissions", of Chapter 10.56, "Air Pollution Control", of the Metropolitan Code of Law	Owner or Designated Representative: Mark W. Grones Facilities Management Services, Assistant Director	Belmont University	Company Name:
Correct.									38.19 lbs/day		O ₃ Sea. Avg. Daily Process Wt. (Include Units)	(7)	n accordance with Section	ssistant Director		TYPICA
									5.38 Gals/day	97.69 MMCF	O ₃ Sea. Avg. Daily Fuel Usage & Type (Include Units)	(8)	n 10.56.290, "Measu	Mailing Address:	Filysical Eccalion	TYPICAL OZONE SEASON DAY EMISSION INVENTORY REPORT
Title: Faciliti									ω	92	Total O ₃ Season Days of Operation	(9)	rement of Emis			DAY EMISSION
Facilities Managem									22	39	Dec Feb.	(10) Per	sions", of Ch	1900 Belmont Boulevard ATT: FMS Nashville, TN 37212	1900 Belmont Boulevard Nashville, TN 37212	NINVENTOR
ment Services, Assistant Director									24	39	March- May	(10) Percentage of Annual Throughput	apter 10.56.	u.	O.	Y REPORT
s, Assistant		(12)							25	17	June- August	nnual Throu	"Air Pollution			
Director) Total							30	22	Sept Nov.	ghput	on Control",			
		888.00							870.34	17.66	Nitrogen Dioxide	(11) Poll	of the Metro	Telephone Number:	P ₁	Mot
Month		228.01							213.18	14.83	Carbon Monoxide	(11) Pollutants Emitted in Pounds/Day	opolitan Code of		Pollution Control Division 311 23rd Avenue North Nashville, TN 37203	
Day Year 11 2016	1	41.45							43.63	0.971	Volatile Organic Compounds	า Pounds/Day	Law	(615) 460-6670	Division e North 37203	1

207-00-075 (Rev. 10/06) Mark W. Grones	S	We have no hazardous emissions to report.	(8) Total of Each Hazardous Air Pollutant										323-2 2 2*	323-1 1 1*	No. Permit No. No. CAS No.	it Source No. Group Pr	(2) (3) (4) (5) (6)	The following information is submitted in accordance with Section 10.56.290, "Measurement of Emissions", of C	Mark W. Grones FMS, Assistant Director	Owner or Designated Representative: Title Mailing Address:	Belmont University	(1) Company Name
r common management outrood, nasistant Director	Title: Facilities Management Services Assistant Director																(7) Type and Amount of Hazardous Air Pollutants Emitted in Tons/Year	"Measurement of Emissions", of Chapter 10.56. "Air Pollution Cont		Address: 1900 Belmont Blvd.	Nashville, TN 37212	
February 10 2016	Month Day Year	Date															Emitted in Tons/Year	hapter 10.56. "Air Pollution Control", of the Metropolitan Code of Law	(615) 460 - 6670	Telephone Number:	311 23rd Avenue North Neshville, TN 37203	Dollation Control Division

METRO Annual Emission Report Belmont University Permit # 323-1

2	n	14	E
_	U	ш	O

VOC

0.18

MMCF / day during ozone season x

2015												
		Α	nnual Th	roughput Na	atural Gas							
Meter	8800		21001	22004	Thrail	Kenn	Comm	DKNS				
Jan	73,990	1,960	3,497	39,440	3,604	3,141	555	3,461				
Feb	73,480	3,810	3,777	51,130	3,726	3,887	578	4,005				
Mar	56,100	2,870	2,681	29,720	1,823	2,532	406	2,500				
Apr	40,920	2,220	2,121	18,380	1,025	1,674	290					
ALC: NO STATE OF THE PARTY OF T	30,730	2,090	1,815	15,660	328			1,951				
May						710	101	998				
Jun	35,490	1,670	2,297	12,940	506	831	170	965				
Jul	38,800	1,630	1,952	13,610	376	639	110	771				
Aug	32,940	1,140	2,015	9,890	722	1,272	202	1,486				
Sep	31,730	2,030	2,653	10,120	975	1,755	326	1,854				
Oct	40,500	2,200	3,057	14,770	1,825	2,299	392	2,161				
Nov	60,960	2,340	3,295	23,740	3,103	2,709	457	2,563				
Dec_	63,160	3,260	4,037	24,390	2,636	2,913	394	2,157				
Total:	578,800	27,220	33,197	263,790	20,629	24,362	3,981	24,872				
				_			c					
	976,851	CCF /	10,000	CCF/MMCF =	97.69	MMCF						
								_				
	365	days / yr x	24	hrs =	8,760	annual hrs o	of operation	1				
				-				•				
PM	97.69	MMBTU x	7.6	lbs / MMCF =	742.41	lbs/	2,000	lbs / ton =	0.3712	tons per year		
							25					
SO2	97.69	MMBTU x	0.6	lbs / MMCF =	58.61	lbs /	2,000	lhs / ton =	0.0293	tons per year		
320,000,000	COLUMN AND AND AND AND AND AND AND AND AND AN					1007	2,000	1007 1011		tono par your		
NO2	97.69	MMBTU x	100	Iba / MANAGE -	9,768.51	16-2-7	2,000	16-71	4 0042	tons per year		
NOZ	97.09	MINIBIOX	100	lbs / MMCF =	9,700.51	lbs /	2,000	lbs / ton =	4.0043	tons per year		
00	07.00		0.4		0.005.55		0.000		4.4000			
CO	97.69	MMBTU x	84	lbs / MMCF =	8,205.55	lbs /	2,000	lbs / ton =	4.1028	tons per year		
			10000						-			
VOC	97.69	MMBTU x	5.5	lbs / MMCF =	537.27	lbs /	2,000	lbs / ton =	0.2686	tons per year		
				122 0								
					al Gas Cor							
					Ozone Qua	arters						
	CCF			CCF			CCF			CCF		
D			14			Live			04			
Dec	102,947		Mar				54,869		Sept	51,443		
Jan	129,648		Apr				57,888		Oct	67,204		
Feb	144,393		May			Aug			Nov	99,167		
total_	376,988	- 9	total				162,424		total_	217,814		
1st Qtr	39%		2nd Qtr	39%		3rd Qtr	17%		4th Qtr	22%		
									Management			_
97.69	MMCF x	17%	=	16.24	MMCF /	92	days	min	0.1765	MMCF / day during or	cone season	
74440C												77
NO ₂	0.18	MMCF / day o	during ozone	season x	100	lbs / MMCF	=	17.6548	lbs / day			
CO	0.18	MMCF / day o	during ozone	season x	84	lbs / MMCF	=	14.8300	lbs / day			
			(50)									
1/00	0.40						1	0.0740				

5.5 lbs / MMCF

0.9710 lbs / day

2013	8																		
Jan Feb Mai Api May Jun Aug Sep Oct Nov Dec Total:	165 135 195 168 165 155 120 135 165 225 105	CEC Gal 107.01 142.40 116.51 168.29 144.98 142.40 133.77 103.56 116.51 142.40 194.18 90.62	60	2015 Annua Garage Time 30 30 15 0 30 30 30 75 45 60 75 60 45		- A	el Fuel Hillside Time 30 30 15 0 30 30 75 45 60 75 60 45	Hillside Gal 2,95 2,95 1,47 0,00 2,95 2,95 2,95 7,37 4,42 5,90 7,37 4,42 48,65		MPAC Time 30 30 15 0 30 37 5 45 60 75 60 45	MPAC Gal 2.95 2.95 1.47 0.00 2.95 2.95 7.37 4.42 5.90 7.37 5.90 4.42	_	CWhorter Time 75 60 60 60 75 60 60 75 60 60 75 60 60 75	Gallons 7.37 5.90 5.90 5.90 7.37 5.90 7.37 5.90 7.37 5.90 5.90 7.37 5.90 7.37	McAfee Time 70 30 0 0 30 30 30 75 45 60 75 60 45	Gallons 6.90 2.95 0.00 0.00 2.95 2.95 7.37 4.42 5.90 7.37 5.90 4.42	Dickens Time 30 30 15 0 30 75 45 60 75 60 45	Gallons 2.95 2.95 1.47 0.00 2.95 2.95 7.37 4.42 5.90 7.37 5.90 4.42	
Total Fuel Usage:	1,999 1,999	gal x gal x	19,300 7.1 lbs/ga	BTU/lbx	7.1 14,191	lbs / gal =	273,879,120 esel fuel	вти/	1,000,000	=	273.88 MMB	TU / yr							
Fuel Usage:	1,603	gal x	19,300	BTU / lb x	7.10	lbs / gal =	219,608,389	BTU/	1,000,000	=	219.61 MMB	TU / yr							
PM	219.61	MMBTU x	0.1	bs / MMBTU :	21.96	lbs /	2,000	lbs / ton =	0.0110	tons per year	1								
SO2	219.61	MMBTU x	0.505	bs / MMBTU :	110.90	lbs /	2,000	lbs / ton =	0.0555	tons per year]								
NO2	219.61	MMBTU x	3.2	bs/MMBTU:	702.75	lbs /	2,000	lbs / ton =	0.3514	tons per year]								
со	219.61	MMBTU x	0.85	bs/MMBTU:	186.67	lbs /	2,000	ibs / ton =	0.0933	tons per year]								
VOC	219.61	MMBTU x	0.09	bs / MMBTU :		lbs /	2,000	lbs / ton =	0.0099	tons per year]								
				Gara	age, Hills	ide, MPAC	C, McAfee												
Fuel Usage:	271	gal x	19,300	BTU / Ib x	7.10	lbs / gal =	37,096,762	BTU/	1,000,000	22	37.10 MMB	TU / yr							
PM	37.10	MMBTU x	1.82	bs / MMBTU :	67.52	lbs /	2,000	lbs / ton =	0.0338	tons per year	1								
SO2	37.10	MMBTU x	4.62	bs / MMBTU :	171.39	lbs /	2,000	lbs / ton =	0.0857	tons per year]								
NO2	37,10	MMBTU x	38.5	bs/MMBTU:	1,428.23	lbs /	2,000	lbs / ton =	0.7141	tons per year]								
со	37.10	MMBTU x	9.43	bs / MMBTU :	349.82	lbs /	2,000	lbs / ton =	0.1749	tons per year	I								
voc	37.10	MMBTU x	1.93	bs / MMBTU :	71.60	lbs /	2,000	lbs / ton =	0.0358	tons per year	1								
					McWhor	ter & Dick	cens												
Fuel Usage:	125	gal x	19,300	BTU / lb x	7.10	lbs / gal =	17,173,970	BTU/	1,000,000	=	17.17 MMB	TU / yr							
PM	17.17	MMBTU x	1.82	bs / MMBTU :	31.26	lbs /	2,000	lbs / ton =	0.0156	tons per year	l								
SO2	17.17	MMBTU x	4.62	bs / MMBTU :	79.34	lbs /	2,000	lbs / ton =	0.0397	tons per year]								
NO2	17.17	MMBTU x	38.5	bs / MMBTU :	661.20	lbs /	2,000	lbs / ton =	0.3306	tons per year	I								
со	17,17	MMBTU x	9.43	bs / MMBTU :	161.95	lbs /	2,000	lbs / ton =	0.0810	tons per year]								
VOC	17.17	MMBTU x	1.93	bs / MMBTU :		lbs /	2,000	lbs / ton =	0.0166	tons per year	<u> </u>								
						onsumpti e <i>Quarter</i>													
Dec Jan Feb total 1st Qtr	Gal 125 138 168 430 22%		Mar Apr May total 2nd Qtr	174 172 476		Jun July Aug total 3rd Qtr	Gal 168 189 138 495	#days 30 31 31 92	Sept Oct Nov total 4th Qtr	Gal 161 198 239 597 30%	el								
	MMBTU x gal/day x 22.61	25% 7.1 lbs/gal MMBTU / day	= = during ozone	38.19 I	MMBTU/ bs/day 38.50	3 os/MMBT	days	870.3424		MMBTU / day dun	ng azone season								
со	22.61	MMBTU / day				os / MMBT		213.1774											
voc		MMBTU / day o				os / MMBT	- [43.6302											
****				Tot	tal Emiss	ions for th	ne Year												
						0.0604													

PM 0.0604 tons per year

SO2 0.1808 tons per year

NO2 1.3961 tons per year CO 0.3492 tons per year

VOC 0.0623 tons per year