University of North Carolina at Chapel Hill

Chapel Hill, North Carolina

Orange County

Facility ID # 6800043

Permit # 03069T35

2019 Annual Emissions Inventory **Facility Summary**

Pollutant	Units	Boiler #6				Boiler #6	Boiler #7				Boiler #7	Boiler #8		Boiler #8	Boiler #9		Boiler #9	Boiler #10		Boiler #10	Railcar Dump Pits	Coal Storage Silos	Coal Silo Conveyors	Sorbent Railcar Dump Pit	Ash Silo w/ Loadout	Coal Conveyor & Crusher Building	Blackstart Generators G1 & G2	Sterilizers located at Dental School	Grouped Small Emergency Generators (No. 2 Fuel Oil)	EPA Building Emergency Generator	Bondurant Emergency Generator	New East Emergency Generator
		Natural Gas	Fuel Oil	Wood	Coal	Total	Natural Gas	Fuel Oil	Wood	Coal	Total	Natural Gas	Fuel Oil	Total	Natural Gas	Fuel Oil	Total	Natural Gas	Fuel Oil	Total												
Criteria Pollutants																																
PM	tpy	1.44	0.00E+00	0.00E+00	3.40	4.84	1.17	0.00E+00		2.64	3.81	0.223	0.00E+00	0.223	0.549	0.000	0.549	0.395	0.000	0.395	3.84E-03	0.0026	0.0026	1.06E-02	1.14	0.41	0.05		0.167	1.23E-03	7.70E-03	
PM-10	tpy	1.44	0.00E+00	0.00E+00	3.40	4.84	1.17	0.00E+00		2.64	3.81	0.223	0.00E+00	0.223	0.549	0.000	0.549	0.395	0.000	0.395	1.81E-03	0.0026	0.0026	4.99E-03	1.14	0.41	0.05		0.167	1.23E-03	7.70E-03	
PM-2.5	tpy	1.44	0.00E+00	0.00E+00	1.96	3.40	1.17	0.00E+00		1.52	2.69	0.223	0.00E+00	0.223	0.549	0.000	0.549	0.395	0.000	0.395	5.70E-04	0.0025	0.0025	1.57E-03	1.08	0.39	0.05		0.167	1.23E-03	7.70E-03	
NOx	tpy	35.13	0.00E+00	0.00E+00	72.75	107.88	37.85	0.00E+00		75.11	112.96	1.631	0.00E+00	1.631	3.026	0.000	3.026	2.533	0.000	2.533							0.90		2.37	2.33E-02	1.46E-01	
VOC	tpy	1.04	0.00E+00	0.00E+00	0.19	1.23	0.85	0.00E+00		0.14	0.99	0.161	0.00E+00	0.161	0.397	0.000	0.397	0.286	0.000	0.286							0.04	0.00	0.193	1.01E-03	6.31E-03	
CO	tpy	15.91	0.00E+00	0.00E+00	13.72	29.62	12.91	0.00E+00		10.67	23.58	2.465	0.00E+00	2.465	6.068	0.000	6.068	4.367	0.000	4.367							0.12		0.51	1.04E-02	6.55E-02	
SO2	tpy	0.00	0.00E+00		157.10	157.10	0.00	0.00E+00		118.05	118.05	0.018	0.00E+00	0.018	0.043	0.000	0.043	0.031	0.000	0.031							0.02		0.03	6.20E-04	3.89E-03	
Greenhouse Gases																																
CO2	tpy	27,634	0.00	0.00	100,594	128,228	22,546	0.00E+00		78,652	101,198	1,505	0	1,505	10,346	0	10,346	7,573	0	7,573							77.40		87.63	2.00	12.56	
Methane	tpy	0.43	0.00E+00	0.00E+00	9.8	10.18	0.35	0.00E+00		7.59	7.94	0.066	0.00E+00	0.066	0.163	0.000	0.163	0.118	0.000	0.118							0.003		3.55E-03	8.13E-05	5.10E-04	
Nitrous Oxide	tpy	0.043	0.00E+00	0.00E+00	1.4	1.46	3.48E-02	0.00E+00		1.10	1.14	0.007	0.00E+00	0.007	0.016	0.000	0.016	0.012	0.000	0.012							0.0006		7.11E-04	1.63E-05	1.02E-04	
HAPs/TAPs																																
1,3 Butadiene	lb/yr					0					0			0			0			0									4.20E-02			
2,3,7,8-TCDD	lb/yr			0.00E+00	4.68E-07	4.68E-07				3.63E-07	3.63E-07			0			0			0												
2,4-Dinitrotoluene	lb/yr				9.16E-03	9.16E-03				0.01	0.01			0			0			0												
2-Chloroacetophenone	lb/yr				0.23	0.23				0.18	0.17757873			0			0			0												
Acetaldehyde	lb/yr			0.00E+00	18.65	18.65				14.46	14.46			0			0			0							0.02		8.24E-01	6.19E-04	3.88E-03	
Acetic Acid	lb/yr					0					0			0			0			0												
Acetophenone	lb/yr			0.00E+00	0.49	0.49				0.38	0.38			0			0			0												
Acrolein	lb/yr			0.00E+00	9.49	9.49				7.36	7.36			0			0			0							0.01		9.94E-02	1.94E-04	1.21E-03	
Antimony	lb/yr		0.00E+00	0.00E+00	0.26	0.26		0.00E+00		0.20	0.20			0			0			0												
Arsenic	lb/yr	0.08	0.00E+00	0.00E+00	0.24	0.32	6.15E-02	0.00E+00		0.19	0.25	0.012	0.00E+00	0.012	0.029	0.000	0.029	0.021	0.000	0.021									4.30E-03	9.83E-05	6.16E-04	
Benzene	lb/yr	0.8	0.00E+00	0.00E+00	42.53	43.33	6.46E-01	0.00E+00		32.98	33.62	0.123	0.00E+00	0.123	0.303	0.000	0.303	0.218	0.000	0.218							0.74		1.00E+00	1.91E-02	1.20E-01	
Benzo(a)pyrene	lb/yr			0.00E+00	1.24E-03	1.24E-03				0.00	9.64E-04			0			0			0									2.02E-04	6.31E-06	3.96E-05	
Benzyl Chloride	lb/yr				22.90	22.901963				17.76	17.76			0			0			0												
Beryllium	lb/yr		0.00E+00	0.00E+00	0.04	0.04		0.00E+00		0.03	0.03		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00									3.22E-03	7.37E-05	4.62E-04	
Biphenyl	lb/yr				5.56E-02	0.06				4.31E-02	0.04			0			0			0												
Bis(2-ethylhexyl)phthalate (DEHP)	lb/yr				2.39	2.39				1.85	1.85			0			0			0												
Bromine	lb/yr				6.60	6.60				5.13	5.13			0			0			0												
Bromoform	lb/yr				1.28	1.28				0.99	0.99			0			0			0												
Cadmium	lb/yr	0.42	0.00E+00	0.00E+00	1.12E-01	0.53	3.38E-01	0.00E+00		8.70E-02	0.43	0.065	0.00E+00	0.065	0.159	0.000	0.159	0.114	0.000	0.114									3.22E-03	7.37E-05	4.62E-04	
Carbon Disulfide	lb/yr				4.25	4.25				3.30	3.30			0			0			0												
Chlorine	lb/yr			0.00E+00	86.89	86.89				67.60	67.60																					
Chlorobenzene	lb/yr			0.00E+00	0.72	0.72				0.56	0.56			0			0			0												
Chloroform	lb/yr			0.00E+00	1.93	1.93				1.50	1.50			0			0			0												
Chromium	lb/yr	0.53	0.00E+00	0.00E+00	3.86	4.39	4.30E-01	0.00E+00		3.00	3.43	0.082	0.00E+00	0.082	0.202	0.000	0.202	0.146	0.000	0.146									3.22E-03	7.37E-05	4.62E-04	
Chromium VI	lb/yr	0.53	0.00E+00		0.01	0.54	4.30E-01	0.00E+00		0.01	0.44	0.082	0.00E+00	0.082	0.202	0.000	0.202	0.146	0.000	0.146												
Cobalt	lb/yr		0.00E+00	0.00E+00	0.22	0.22		0.00E+00		0.17	0.17			0			0			0												
Cumene	lb/yr				0.17	0.17				0.13	0.13			0			0			0												
Cyanide	lb/yr				81.79	81.79				63.42	63.42			0			0			0												
Dibenzofurans	lb/yr				6.58E-03	0.01				5.10E-03	0.01			0			0			0												
Dichlorobenzene	lb/yr	0.45				0.45446971	3.69E-01				3.69E-01	0.070		0.070	0.173		0.173	0.125		0.125												
Dimethyl Sulfate	lb/yr				1.57	1.57				1.22	1.22			0			0			0												
Ethyl Benzene	lb/yr		0.00E+00	0.00E+00	3.08	3.08		0.00E+00		2.38	2.38		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00												
Ethyl Chloride	lb/yr				1.37	1.37				1.07	1.07			0			0			0												
Ethylene Dibromide	lb/yr				3.93E-02	0.04				3.04E-02	0.03			0			0			0												
Ethylene Dichloride	lb/yr			0.00E+00	1.31	1.31				1.01	1.01			0			0			0												
Ethylene Glycol	lb/yr					0					0			0			0			0												
Ethylene Oxide	lb/yr					0					0			0			0			0								9.09				
Flouride	lb/yr		0.00E+00			0.00		0.00E+00			0.00		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00												
Formaldehyde	lb/yr	28.40	0.00E+00	0.00E+00	52.94	81.35	2.31E+01	0.00E+00		41.18	64.24	4.402	0.00E+00	4.402	10.835	0.00E+00	10.835	7.798	0.00E+00	7.798							0.07		1.27E+00	1.94E-03	1.22E-02	
Glycol Ethers	lb/yr					0					0			0			0			0												
Hexane	lb/yr	681.70			2.19	683.90	5.53E+02			1.70	555.06	105.638		105.638	260.046		260.046	187.146		187.146												
Hydrogen Chloride	lb/yr			0.00E+00	16,091.57	16,091.57				12642.96	12642.96			0			0			0												
Hydrogen Fluoride	lb/yr				185.05	185.05				143.95	143.95			0			0			0												
Isophorone	lb/yr				18.98	18.98				14.71	14.71			0			0			0												
Lead	lb/yr	0.19	0.00E+00	0.00E+00	1.42	1.61	1.54E-01	0.00E+00		1.10	1.26	0.029	0.00E+00	0.029	0.072	0.000	0.072	0.052	0.000	0.052									9.67E-03	2.21E-04	1.39E-03	
Manganese	lb/yr	0.14	0.00E+00	0.00E+00	9.65	9.80	1.17E-01	0.00E+00		7.51	7.63	0.022	0.00E+00	0.022	0.055	0.000	0.055	0.040	0.000	0.040									6.45E-03	1.47E-04	9.24E-04	
Mercury	lb/yr	0.10	0.00E+00	0.00E+00	0.67	0.77	7.99E-02	0.00E+00		0.52	0.60	0.015	0.00E+00	0.015	0.038	0.000	0.038	0.027	0.000	0.027									3.22E-03	7.37E-05	4.62E-04	
Methly Chloride	lb/yr			0.00E+00	17.34	17.34				13.45	13.45			0			0			0												
Methly Ethyl Ketone	lb/yr			0.00E+00	12.76	12.76				9.89	9.89			0			0			0												
Methyl Bromide	lb/yr				5.23	5.23				4.06	4.06			0			0			0												
Methyl Chloroform	lb/yr		0.00E+00	0.00E+00		0.00E+00		0.00E+00			0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00												
Methyl Hydrazine	lb/yr				5.56	5.56				4.31	4.31			0			0			0												
Methyl Methacrylate	lb/yr				0.65	0.65				0.51	0.51			0			0			0												
Methyl Tert Butyl Ether	lb/yr				1.15	1.15				0.89	0.89			0			0			0												
Methylene Chloride	lb/yr			0.00E+00	9.49	9.49				7.36	7.36			0			0			0												
Napthalene	lb/yr	0.23	0.00E+00	0.00E+00	0.43	0.66	1.88E-01	0.00E+00		0.33	0.52	0.036	0.00E+00	0.036	0.088	0.000	0.088	0.063	0.000	0.063							0.12		9.11E-02	3.19E-03	2.00E-02	
Nickel	lb/yr	0.80	0.00E+00	0.00E+00	7.86	8.66	6.46E-01	0.00E+00		6.11	6.76	0.123	0.00E+00	0.123	0.303	0.000	0.303	0.218	0.000	0.218									3.22E-03	7.37E-05	4.62E-04	
PAH	lb/yr					0					0			0			0			0									1.81E-01	5.21E-03	3.27E-02	
Phenol	lb/yr			0.00E+00	0.52	0.52				0.41	0.41			0			0			0												
Phosphorus	lb/yr			0.00E+00	1.17	1.17				0.91	0.91																					
POM	lb/yr	0.25	0.00E+00	0.00E+00	1.80	2.05	2.03E-01	0.00E+00		1.40	1.61	0.039	0.00E+00	0.039	0.096	0.000	0.096	0.069	0.000	0.069												
Propionaldehyde	lb/yr			0.00E+00	12.43	12.43				9.64	9.64			0			0			0												
Propylene	lb/yr					0					0			0			0			0							0.20					
Selenium	lb/yr		0.00E+00	0.00E+00	0.17	0.17		0.00E+00		0.13	0.13		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00									1.61E-02	3.69E-04	2.31E-03	
Styrene	lb/yr			0.00E+00	0.82	0.82				0.63	0.63			0			0			0												
Tetrachloroethane	lb/yr				1.41	1.41				1.09	1.09			0			0			0												
Toluene	lb/yr	1.29	0.00E+00	0.00E+00	7.85	9.14	1.05E+00	0.00E+00		6.09	7.13	0.200	0.00E+00	0.200	0.491	0.000	0.491	0.353	0.000	0.353							0.27		4.40E-01	6.90E-03	4.33E-02	
Vinyl Acetate	lb/yr				0.25	0.25				0.19	0.19			0			0			0												
Xylenes	lb/yr		0.00E+00	0.00E+00	1.21	1.21		0.00E+00		0.94	0.94		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00							0.18		3.06E-01	4.74E-03	2.97E-02	

University of North Carolina at Chapel I

Chapel Hill, North Carolina

Orange County

Facility ID # 6800043

Permit # 03069T35

2019 Annual Emissions Inventory

Pollutant	Units	Burnett-Womack Building Emergency Generator	Mary Ellen Jones Building Emergency Generator	Genetic Medicine Building Emergency Generator	440 W. Franklin Emergency Generator	Rams Head Emergency Generator	ITS Emergency Generator	Brinkhous-Bullitt Emergency Generator	Venable Emergency Generator	IRB Emergency Generator	Thurston Bowles Building Emergency Generator	Genomic Science Building Emergency Generator	Dental Research Building Emergency Generator	Lineberger Emergency Generator	Taylor Hall Emergency Generator	Old Dental School Emergency Generator	Neuroscience Research Emergency Generator	MBRB Emergency Generator	Michael Hooker Bldg. Emergency Generator	Chapman Hall Emergency Generator	Caudill Labs Emergency Generator	Kenan Fire Pump	McColl Fire Pump	Davis Library Fire Pump	Davie Hall Emergency Generator	Ambulatory Care Emergency Generator
Criteria Pollutants																										
PM	tpy	1.40E-02	1.34E-02	1.50E-02	1.87E-02	1.29E-02	1.80E-02	7.70E-03	1.10E-02	1.90E-02	1.11E-02	1.50E-02	1.10E-02	6.85E-03	6.96E-03		6.82E-03	1.44E-02	5.35E-03	6.85E-03	9.10E-03	1.90E-03	1.01E-03	7.48E-04	2.42E-03	6.26E-03
PM-10	tpy	1.40E-02	1.34E-02	1.50E-02	1.87E-02	1.29E-02	1.80E-02	7.70E-03	1.10E-02	1.90E-02	1.11E-02	1.50E-02	1.10E-02	6.85E-03	6.96E-03		6.82E-03	1.44E-02	5.35E-03	6.85E-03	9.10E-03	1.90E-03	1.01E-03	7.48E-04	2.42E-03	6.26E-03
PM-2.5	tpy	1.40E-02	1.34E-02	1.50E-02	1.87E-02	1.29E-02	1.80E-02	7.70E-03	1.10E-02	1.90E-02	1.11E-02	1.50E-02	1.10E-02	6.85E-03	6.96E-03		6.82E-03	1.44E-02	5.35E-03	6.85E-03	9.10E-03	1.90E-03	1.01E-03	7.48E-04	2.42E-03	6.26E-03
NOx	tpy	2.67E-01	2.54E-01	2.85E-01	3.56E-01	2.46E-01	3.42E-01	1.46E-01	2.09E-01	3.61E-01	2.11E-01	2.85E-01	2.09E-01	1.30E-01	1.32E-01	1.06E-02	1.30E-01	2.74E-01	1.02E-01	1.30E-01	1.73E-01	2.71E-02	1.43E-02	1.06E-02	4.60E-02	1.19E-01
VOC	tpy	1.15E-02	1.10E-02	1.23E-02	1.53E-02	1.06E-02	1.47E-02	6.31E-03	9.03E-03	1.56E-02	9.11E-03	1.23E-02	8.99E-03	5.61E-03	5.70E-03	7.76E-04	5.58E-03	1.18E-02	4.38E-03	5.61E-03	7.45E-03	2.21E-03	1.17E-03	8.69E-04	1.98E-03	5.13E-03
CO	tpy	1.19E-01	1.14E-01	1.27E-01	1.59E-01	1.10E-01	1.53E-01	6.55E-02	9.37E-02	1.61E-01	9.46E-02	1.27E-01	9.33E-02	5.83E-02	5.91E-02	4.41E-03	5.79E-02	1.23E-01	4.55E-02	5.82E-02	7.73E-02	5.84E-03	3.09E-03	2.29E-03	2.06E-02	5.32E-02
SO2	tpy	7.09E-03	6.75E-03	2.27E-04	9.46E-03	6.54E-03	9.08E-03	1.17E-04	1.67E-04	2.88E-04	5.62E-03	2.27E-04	1.66E-04	3.46E-03	3.51E-03	3.51E-07	3.44E-03	7.29E-03	2.70E-03	3.46E-03	4.59E-03	9.31E-06	1.64E-04	1.22E-04	1.22E-03	9.48E-05
Greenhouse Gases																										
CO2	tpy	22.90	21.81	24.43	30.54	21.11	29.31	12.56	17.97	30.97	18.14	24.43	17.90	11.18	11.34	0.48	11.11	23.55	8.72	11.17	14.83	1.00	0.53	0.39	3.95	10.21
Methane	tpy	9.29E-04	8.85E-04	9.91E-04	1.24E-03	8.56E-04	1.19E-03	5.10E-04	7.29E-04	1.26E-03	7.36E-04	9.91E-04	7.26E-04	4.53E-04	4.60E-04	9.08E-06	4.51E-04	9.55E-04	3.54E-04	4.53E-04	6.02E-04	4.06E-05	2.15E-05	1.60E-05	1.60E-04	4.14E-04
Nitrous Oxide	tpy	1.86E-04	1.77E-04	1.98E-04	2.48E-04	1.71E-04	2.38E-04	1.02E-04	1.46E-04	2.51E-04	1.47E-04	1.98E-04	1.45E-04	9.07E-05	9.20E-05	9.08E-07	9.02E-05	1.91E-04	7.08E-05	9.06E-05	1.20E-04	8.13E-06	4.30E-06	3.19E-06	3.21E-05	8.28E-05
HAPs/TAPs																										
1,3 Butadiene	lb/yr																					4.80E-04	2.54E-04	1.89E-04		
2,3,7,8-TCDD	lb/yr																									
2,4-Dinitrotoluene	lb/yr																									
2-Chloroacetophenone	lb/yr																									
Acetaldehyde	lb/yr	7.08E-03	6.74E-03	7.55E-03	9.44E-03	6.53E-03	9.06E-03	3.88E-03	5.55E-03	9.57E-03	5.61E-03	7.55E-03	5.53E-03	3.45E-03	3.51E-03		3.44E-03	7.28E-03	2.70E-03	3.45E-03	4.58E-03	9.42E-03	4.98E-03	3.70E-03	1.22E-03	3.15E-03
Acetic Acid	lb/yr																									
Acetophenone	lb/yr																									
Acrolein	lb/yr	2.21E-03	2.11E-03	2.36E-03	2.95E-03	2.04E-03	2.83E-03	1.21E-03	1.74E-03	2.99E-03	1.75E-03	2.36E-03	1.73E-03	1.08E-03	1.10E-03		1.07E-03	2.28E-03	8.43E-04	1.08E-03	1.43E-03	1.14E-03	6.01E-04	4.47E-04	3.82E-04	9.87E-04
Antimony	lb/yr																									
Arsenic	lb/yr	1.12E-03	1.07E-03	1.20E-03	1.50E-03	1.04E-03	1.44E-03	6.16E-04	8.82E-04	1.52E-03	8.90E-04	1.20E-03	8.78E-04	5.48E-04	5.56E-04		5.45E-04	1.16E-03	4.28E-04	5.48E-04	7.28E-04	4.92E-05	2.60E-05	1.93E-05	1.94E-04	5.01E-04
Benzene	lb/yr	2.18E-01	2.08E-01	2.32E-01	2.91E-01	2.01E-01	2.79E-01	1.20E-01	1.71E-01	2.95E-01	1.73E-01	2.32E-01	1.70E-01	1.06E-01	1.08E-01		1.06E-01	2.24E-01	8.30E-02	1.06E-01	1.41E-01	1.15E-02	6.06E-03	4.50E-03	3.76E-02	9.71E-02
Benzo(a)pyrene	lb/yr	7.22E-05	6.87E-05	7.70E-05	9.63E-05	6.65E-05	9.24E-05	3.96E-05	5.66E-05	9.76E-05	5.72E-05	7.70E-05	5.64E-05	3.52E-05	3.57E-05		3.50E-05	7.42E-05	2.75E-05	3.52E-05	4.67E-05	2.31E-06	1.22E-06	9.08E-07	1.25E-05	3.22E-05
Benzyl Chloride	lb/yr																									
Beryllium	lb/yr	8.43E-04	8.03E-04	8.99E-04	1.12E-03	7.77E-04	1.08E-03	4.62E-04	6.61E-04	1.14E-03	6.68E-04	8.99E-04	6.59E-04	4.11E-04	4.17E-04		4.09E-04	8.67E-04	3.21E-04	4.11E-04	5.46E-04	3.69E-05	1.95E-05	1.45E-05	1.45E-04	3.76E-04
Biphenyl	lb/yr																									
Bis(2-ethylhexyl)phthalate (DEHP)	lb/yr																									
Bromine	lb/yr																									
Bromoform	lb/yr																									
Cadmium	lb/yr	8.43E-04	8.03E-04	8.99E-04	1.12E-03	7.77E-04	1.08E-03	4.62E-04	6.61E-04	1.14E-03	6.68E-04	8.99E-04	6.59E-04	4.11E-04	4.17E-04		4.09E-04	8.67E-04	3.21E-04	4.11E-04	5.46E-04	3.69E-05	1.95E-05	1.45E-05	1.45E-04	3.76E-04
Carbon Disulfide	lb/yr																									
Chlorine	lb/yr																									
Chlorobenzene	lb/yr																									
Chloroform	lb/yr																									
Chromium	lb/yr	8.43E-04	8.03E-04	8.99E-04	1.12E-03	7.77E-04	1.08E-03	4.62E-04	6.61E-04	1.14E-03	6.68E-04	8.99E-04	6.59E-04	4.11E-04	4.17E-04		4.09E-04	8.67E-04	3.21E-04	4.11E-04	5.46E-04	3.69E-05	1.95E-05	1.45E-05	1.45E-04	3.76E-04
Chromium VI	lb/yr																									
Cobalt	lb/yr																									
Cumene	lb/yr																									
Cyanide	lb/yr																									
Dibenzofurans	lb/yr																									
Dichlorobenzene	lb/yr																									
Dimethyl Sulfate	lb/yr																									
Ethyl Benzene	lb/yr																									
Ethyl Chloride	lb/yr																									
Ethylene Dibromide	lb/yr																									
Ethylene Dichloride	lb/yr																									
Ethylene Glycol	lb/yr																									
Ethylene Oxide	lb/yr																									
Flouride	lb/yr																									
Formaldehyde	lb/yr	2.22E-02	2.11E-02	2.36E-02	2.96E-02	2.04E-02	2.84E-02	1.22E-02	1.74E-02	3.00E-02	1.76E-02	2.36E-02	1.73E-02	1.08E-02	1.10E-02		1.08E-02	2.28E-02	8.44E-03	1.08E-02	1.44E-02	1.45E-02	7.66E-03	5.70E-03	3.82E-03	9.88E-03
Glycol Ethers	lb/yr																									
Hexane	lb/yr																									
Hydrogen Chloride	lb/yr																									
Hydrogen Fluoride	lb/yr																									
Isophorone	lb/yr																									
Lead	lb/yr	2.53E-03	2.41E-03	2.70E-03	3.37E-03	2.33E-03	3.24E-03	1.39E-03	1.98E-03	3.42E-03	2.00E-03	2.70E-03	1.98E-03	1.23E-03	1.25E-03		1.23E-03	2.60E-03	9.63E-04	1.23E-03	1.64E-03	1.11E-04	5.85E-05	4.34E-05	4.36E-04	1.13E-03
Manganese	lb/yr	1.69E-03	1.61E-03	1.80E-03	2.25E-03	1.55E-03	2.16E-03	9.24E-04	1.32E-03	2.28E-03	1.34E-03	1.80E-03	1.32E-03	8.23E-04	8.35E-04		8.18E-04	1.73E-03	6.42E-04	8.22E-04	1.09E-03	7.37E-05	3.90E-05	2.90E-05	2.91E-04	7.51E-04
Mercury	lb/yr	8.43E-04	8.03E-04	8.99E-04	1.12E-03	7.77E-04	1.08E-03	4.62E-04	6.61E-04	1.14E-03	6.68E-04	8.99E-04	6.59E-04	4.11E-04	4.17E-04		4.09E-04	8.67E-04	3.21E-04	4.11E-04	5.46E-04	3.69E-05	1.95E-05	1.45E-05	1.45E-04	3.76E-04
Methly Chloride	lb/yr																									
Methly Ethyl Ketone	lb/yr																									
Methyl Bromide	lb/yr																									
Methyl Chloroform	lb/yr																									
Methyl Hydrazine	lb/yr																									
Methyl Methacrylate	lb/yr																									
Methyl Tert Butyl Ether	lb/yr																									
Methylene Chloride	lb/yr																									
Napthalene	lb/yr	3.65E-02	3.48E-02	3.89E-02	4.87E-02	3.37E-02	4.67E-02	2.00E-02	2.87E-02	4.94E-02	2.89E-02	3.89E-02	2.85E-02	1.78E-02	1.81E-02		1.77E-02	3.76E-02	1.39E-02	1.78E-02	2.36E-02	1.04E-03	5.51E-04	4.09E-04	6.30E-03	1.63E-02
Nickel	lb/yr	8.43E-04	8.03E-04	8.99E-04	1.12E-03	7.77E-04	1.08E-03	4.62E-04	6.61E-04	1.14E-03	6.68E-04	8.99E-04	6.59E-04	4.11E-04	4.17E-04		4.09E-04	8.67E-04	3.21E-04	4.11E-04	5.46E-04	3.69E-05	1.95E-05	1.45E-05	1.45E-04	3.76E-04
PAH	lb/yr	5.95E-02	5.67E-02	6.35E-02	7.94E-02	5.49E-02	7.62E-02	3.27E-02	4.67E-02	8.05E-02	4.72E-02	6.35E-02	4.65E-02	2.91E-02	2.95E-02		2.89E-02	6.12E-02	2.27E-02	2.90E-02	3.86E-02	2.06E-03	1.09E-03	8.11E-04	1.03E-02	2.65E-02
Phenol	lb/yr																									
Phosphorus	lb/yr																									
POM	lb/yr																									
Propionaldehyde	lb/yr																									
Propylene	lb/yr																									
Selenium	lb/yr	4.21E-03	4.01E-03	4.49E-03	5.62E-03	3.88E-03	5.39E-03	2.31E-03	3.31E-03	5.70E-03	3.34E-03	4.49E-03	3.29E-03	2.06E-03	2.09E-03		2.04E-03	4.33E-03	1.61E-03	2.05E-03	2.73E-03	1.84E-04	9.74E-05	7.24E-05	7.27E-04	1.88E-03
Styrene	lb/yr																									
Tetrachloroethane	lb/yr																									
Toluene	lb/yr	7.89E-02	7.52E-02	8.42E-02	1.05E-01	7.28E-02	1.01E-01	4.33E-02	6.19E-02	1.07E-01	6.25E-02	8.42E-02	6.17E-02	3.85E-02	3.91E-02		3.83E-02	8.12E-02	3.01E-02	3.85E-02	5.11E-02	5.03E-03	2.66E-03	1.97E-03	1.36E-02	3.52E-02
Vinyl Acetate	lb/yr																									
Xylenes	lb/yr	5.42E-02	5.16E-02	5.78E-02	7.23E-02	5.00E-02	6.94E-02	2.97E-02	4.25E-02	7.33E-02	4.30E-02	5.78E-02	4.24E-02	2.65E-02	2.68E-02		2.63E-02	5.58E-02	2.07E-02	2.64E-02	3.51E-02	3.50E-03	1.85E-03	1.38E-03	9.36E-03	2.42E-02

University of North Carolina at Chapel I

Chapel Hill, North Carolina

Orange County

Facility ID # 6800043

Permit # 03069T35

2019 Annual Emissions Inventory

Pollutant	Units	Old Dental School Emergency Generator	Lineberger Addition Emergency Generator	Morehead Planetarium Emergency Generator	Phillips Hall Emergency Generator	Med B Emergency Generator	Kenan Stadium Electric Fire Pump	Beard Hall Emergency Generator	Bioinformatics Emergency Generator	Glaxo Emergency Generator	Northeast Chiller Emergency Generator	Carmichael Auditorium Emergency Generator	Hinton James Emergency Generator #2	POB Emergency Generator	Bell Tower PD Emergency Generator	Grouped Insignificant SBs	Davie Hall Small Boiler SB-6	Fuel Oil Storage Tanks Manning	Fuel Oil Storage Tanks Cogen	Total
Criteria Pollutants																				
PM	tpy		5.09E-03		5.35E-03	2.24E-03	3.50E-03	5.14E-03	3.85E-03	3.48E-03	3.75E-03	8.36E-03	6.97E-03	5.22E-03	5.22E-03	4.97E-02	3.67E-03			12.0
PM-10	tpy		5.09E-03		5.35E-03	2.24E-03	3.50E-03	5.14E-03	3.85E-03	3.48E-03	3.75E-03	8.36E-03	6.97E-03	5.22E-03	5.22E-03	4.97E-02	3.67E-03			11.9
PM-2.5	tpy		5.09E-03		5.35E-03	2.24E-03	3.50E-03	5.14E-03	3.85E-03	3.48E-03	3.75E-03	8.36E-03	6.97E-03	5.22E-03	5.22E-03	4.97E-02	3.67E-03			9.3
NOx	tpy	1.06E-02	9.68E-02	1.25E-02	1.02E-01	3.19E-02	6.66E-02	9.76E-02	7.32E-02	6.61E-02	7.12E-02	1.19E-01	9.91E-02	7.43E-02	7.43E-02	6.54E-01	4.83E-02			237.6
VOC	tpy	7.76E-04	4.17E-03	9.20E-04	4.38E-03	2.60E-03	2.87E-03	4.21E-03	3.15E-03	2.85E-03	3.07E-03	9.71E-03	8.09E-03	6.07E-03	6.07E-03	3.60E-02	2.65E-03	0.017	0.22	3.8
CO	tpy	4.41E-03	4.33E-02	5.23E-03	4.55E-02	6.86E-03	2.98E-02	4.37E-02	3.27E-02	2.96E-02	3.18E-02	2.56E-02	2.13E-02	1.60E-02	1.60E-02	5.50E-01	4.05E-02			69.7
SO2	tpy	3.51E-07	2.57E-03	4.16E-07	2.70E-03	1.09E-05	5.31E-05	2.59E-03	1.95E-03	1.76E-03	1.89E-03	4.09E-05	3.40E-05	2.55E-05	2.55E-05	3.93E-03	2.90E-04			275.4
Greenhouse Gases																				
CO2	tpy	0.48	8.31	0.57	8.72	1.18	5.71	8.37	6.28	5.67	6.11	4.40	3.66	2.75	2.75	785.49	58.0			250,319
Methane	tpy	9.08E-06	3.37E-04	1.08E-05	3.54E-04	4.78E-05	2.32E-04	3.40E-04	2.55E-04	2.30E-04	2.48E-04	1.78E-04	1.49E-04	1.11E-04	1.11E-04	1.48E-02	1.09E-03			18.5
Nitrous Oxide	tpy	9.08E-07	6.74E-05	1.08E-06	7.08E-05	9.55E-06	4.64E-05	6.79E-05	5.10E-05	4.60E-05	4.95E-05	3.57E-05	2.97E-05	2.23E-05	2.23E-05	1.48E-03	1.09E-04			2.6
HAPs/TAPs																				
1,3 Butadiene	lb/yr					5.65E-04						2.11E-03	1.76E-03	1.32E-03	1.32E-03					0.1
2,3,7,8-TCDD	lb/yr																			0.0
2,4-Dinitrotoluene	lb/yr																			0.0
2-Chloroacetophenone	lb/yr																			0.4
Acetaldehyde	lb/yr		2.57E-03		2.70E-03	1.11E-02	1.77E-03	2.59E-03	1.94E-03	1.75E-03	1.89E-03	4.14E-02	3.45E-02	2.59E-02	2.59E-02					34.3
Acetic Acid	lb/yr																			0.0
Acetophenone	lb/yr																			0.9
Acrolein	lb/yr		8.03E-04		8.43E-04	1.34E-03	5.52E-04	8.09E-04	6.07E-04	5.48E-04	5.90E-04	4.99E-03	4.16E-03	3.12E-03	3.12E-03					17.0
Antimony	lb/yr																			0.5
Arsenic	lb/yr		4.08E-04		4.28E-04	5.78E-05	2.80E-04	4.11E-04	3.08E-04	2.78E-04	3.00E-04	2.16E-04	1.80E-04	1.35E-04	1.35E-04					0.7
Benzene	lb/yr		7.91E-02		8.30E-02	1.35E-02	5.44E-02	7.97E-02	5.98E-02	5.40E-02	5.81E-02	5.03E-02	4.19E-02	3.14E-02	3.14E-02	2.75E-02	2.03E-03			83.8
Benzo(a)pyrene	lb/yr		2.62E-05		2.75E-05	2.72E-06	1.80E-05	2.64E-05	1.98E-05	1.79E-05	1.92E-05	1.01E-05	8.45E-06	6.34E-06	6.34E-06	1.57E-05	1.16E-06			0.0
Benzyl Chloride	lb/yr																			40.7
Beryllium	lb/yr		3.06E-04		3.21E-04	4.33E-05	2.10E-04	3.08E-04	2.31E-04	2.09E-04	2.25E-04	1.62E-04	1.35E-04	1.01E-04	1.01E-04					0.1
Biphenyl	lb/yr																			0.1
Bis(2-ethylhexyl)phthalate (DEHP)	lb/yr																			4.2
Bromine	lb/yr																			11.7
Bromoform	lb/yr																			2.3
Cadmium	lb/yr		3.06E-04		3.21E-04	4.33E-05	2.10E-04	3.08E-04	2.31E-04	2.09E-04	2.25E-04	1.62E-04	1.35E-04	1.01E-04	1.01E-04					1.31
Carbon Disulfide	lb/yr																			7.6
Chlorine	lb/yr																			154.5
Chlorobenzene	lb/yr																			1.3
Chloroform	lb/yr																			3.4
Chromium	lb/yr		3.06E-04		3.21E-04	4.33E-05	2.10E-04	3.08E-04	2.31E-04	2.09E-04	2.25E-04	1.62E-04	1.35E-04	1.01E-04	1.01E-04					8.28
Chromium VI	lb/yr																			1.40
Cobalt	lb/yr															1.10E-03	8.11E-05			0.4
Cumene	lb/yr																			0.3
Cyanide	lb/yr																			145.2
Dibenzofurans	lb/yr																			0.0
Dichlorobenzene	lb/yr																			1.2
Dimethyl Sulfate	lb/yr																			2.8
Ethyl Benzene	lb/yr																			5.5
Ethyl Chloride	lb/yr																			2.4
Ethylene Dibromide	lb/yr																			0.1
Ethylene Dichloride	lb/yr																			2.3
Ethylene Glycol	lb/yr																			0.0
Ethylene Oxide	lb/yr																			9.1
Flouride	lb/yr																			0.0
Formaldehyde	lb/yr		8.04E-03		8.44E-03	1.70E-02	5.53E-03	8.10E-03	6.08E-03	5.49E-03	5.91E-03	6.36E-02	5.30E-02	3.98E-02	3.98E-02	9.82E-01	7.24E-02			171.7
Glycol Ethers	lb/yr																			0.0
Hexane	lb/yr															2.36E+01	1.74E+00			1817.1
Hydrogen Chloride	lb/yr																			28734.5
Hydrogen Fluoride	lb/yr																			329.0
Isophorone	lb/yr																			33.7
Lead	lb/yr		9.17E-04		9.63E-04	1.30E-04	6.31E-04	9.24E-04	6.93E-04	6.26E-04	6.74E-04	4.85E-04	4.04E-04	3.03E-04	3.03E-04	6.54E-03	4.83E-04			3.1
Manganese	lb/yr		6.11E-04		6.42E-04	8.67E-05	4.21E-04	6.16E-04	4.62E-04	4.17E-04	4.49E-04	3.24E-04	2.70E-04	2.02E-04	2.02E-04					17.6
Mercury	lb/yr		3.06E-04		3.21E-04	4.33E-05	2.10E-04	3.08E-04	2.31E-04	2.09E-04	2.25E-04	1.62E-04	1.35E-04	1.01E-04	1.01E-04					1.5
Methly Chloride	lb/yr																			30.8
Methly Ethyl Ketone	lb/yr																			22.7
Methyl Bromide	lb/yr																			9.3
Methyl Chloroform	lb/yr																			0.0
Methyl Hydrazine	lb/yr																			9.9
Methyl Methacrylate	lb/yr																			1.2
Methyl Tert Butyl Ether	lb/yr																			2.0
Methylene Chloride	lb/yr																			16.8
Napthalene	lb/yr		1.32E-02		1.39E-02	1.22E-03	9.11E-03	1.34E-02	1.00E-02	9.04E-03	9.74E-03	4.57E-03	3.81E-03	2.86E-03	2.86E-03	7.98E-03	5.89E-04			2.3
Nickel	lb/yr		3.06E-04		3.21E-04	4.33E-05	2.10E-04	3.08E-04	2.31E-04	2.09E-04	2.25E-04	1.62E-04	1.35E-04	1.01E-04	1.01E-04					16.1
PAH	lb/yr		2.16E-02		2.27E-02	2.43E-03	1.49E-02	2.18E-02	1.63E-02	1.47E-02	1.59E-02	9.06E-03	7.55E-03	5.66E-03	5.66E-03					1.4
Phenol	lb/yr																			0.9
Phosphorus	lb/yr																			2.1
POM	lb/yr																			3.9
Propionaldehyde	lb/yr																			22.1
Propylene	lb/yr																			0.2
Selenium	lb/yr		1.53E-03		1.61E-03	2.17E-04	1.05E-03	1.54E-03	1.16E-03	1.04E-03	1.12E-03	8.09E-04	6.74E-04	5.06E-04	5.06E-04	3.14E-04	2.32E-05			0.4
Styrene	lb/yr																			1.5
Tetrachloroethane	lb/yr																			2.5
Toluene	lb/yr		2.86E-02		3.01E-02	5.91E-03	1.97E-02	2.89E-02	2.16E-02	1.95E-02	2.10E-02	2.21E-02	1.84E-02	1.38E-02	1.38E-02	4.45E-02	3.28E-03			19.7
Vinyl Acetate	lb/yr																			0.4
Xylenes	lb/yr		1.97E-02		2.07E-02	4.12E-03	1.35E-02	1.98E-02	1.49E-02	1.34E-02	1.45E-02	1.54E-02	1.28E-02	9.61E-03	9.61E-03					3.7