

University of North Carolina at Chapel Hill

Chapel Hill, North Carolina

Orange County

Facility ID # 6800043

Permit # 03069T36

2021 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	Non-Emergency 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	Burnett-Womack Building 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	2.25	0	0	0.94	3.19	2.20	0	0	0.60	2.80	0.12	0	0.12	0.33	0	0.33	0.14	0	0.14	3.06E-03	2.11E-03	2.11E-03	8.79E-03	1.07	0.33	0.04		0.15	1.31E-03	2.40E-03		4.87E-03												
PM-10	tpy	2.25	0	0	0.94	3.19	2.20	0	0	0.60	2.80	0.12	0	0.12	0.33	0	0.33	0.14	0	0.14	1.45E-03	2.11E-03	2.11E-03	4.16E-03	1.07	0.33	0.04		0.15	1.31E-03	2.40E-03		4.87E-03												
PM-2.5	tpy	2.25	0	0	0.94	3.19	2.20	0	0	0.60	2.80	0.12	0	0.12	0.33	0	0.33	0.14	0	0.14	4.55E-04	2.01E-03	2.01E-03	1.31E-03	1.01	0.31	0.04		0.15	1.31E-03	2.40E-03		4.87E-03												
NOx	tpy	36.41	0	0	33.72	70.13	39.92	0	0	38.74	78.66	0.94	0	0.94	1.97	0	1.97	0.94	0	0.94							0.70		2.14	0.02		0.05		0.09											
VOC	tpy	1.63	0	0	0.13	1.76	1.59	0	0	0.13	1.72	0.09	0	0.09	0.24	0	0.24	0.10	0	0.10							0.03	1.07E-03	0.17	1.07E-03	1.96E-03		3.99E-03												
CO	tpy	24.88	0	0	9.04	33.92	24.28	0	0	11.79	36.07	1.34	0	1.34	3.69	0	3.69	1.59	0	1.59							0.09		0.46	0.01		0.02		0.04											
SO2	tpy	0*	0	0*	99.83	99.83	0*	0	0*	104.14	104.14	9.57E-03	0	9.57E-03	0.03	0	0.03	0.01	0	0.01									7.36E-04	1.98E-05	3.63E-05		7.38E-05												
Greenhouse Gases																																													
CO2	tpy	38,965.26	0.00E+00	0.00E+00	63,442.36	102,407.63	39,533.68	0.00E+00	0.00E+00	67,438.68	106,972.36	608.79	0.00E+00	608.79	6,818.87	0.00E+00	6,818.87	3,105.14	0.00E+00	3,105.14															60.19		79.25	2.14	3.91	7.94					
Methane	tpy	0.67	0.00E+00	0.00E+00	6.87	7.55	0.66	0.00E+00	0.00E+00	7.03	7.68	0.04	0.00E+00	0.04	0.10	0.00E+00	0.10	0.04	0.00E+00	0.04																	2.44E-03	3.21E-03	8.66E-05	1.59E-04	3.22E-04				
Nitrous Oxide	tpy	0.07	0.00E+00	0.00E+00	1.00	1.07	0.07	0.00E+00	0.00E+00	1.02	1.09	3.63E-03	0.00E+00	3.63E-03	0.01	0.00E+00	0.01	4.30E-03	0.00E+00	4.30E-03																		4.88E-04	6.43E-04	1.73E-05	3.17E-05	6.44E-05			
HAPs/TAPs																																													
1,3 Butadiene	lb/yr				0.00E+00					0.00E+00				0.00E+00			0.00E+00			0.00E+00																			0.04						
2,3,7,8-TCDD	lb/yr				0.00E+00	3.28E-07				0.00E+00	3.35E-07	3.35E-07		0.00E+00			0.00E+00			0.00E+00																									
2,4-Dinitrotoluene	lb/yr				6.42E-03	6.42E-03				6.57E-03	6.57E-03			0.00E+00			0.00E+00			0.00E+00																									
2-Chloroacetophenone	lb/yr				0.16	0.16				0.16	0.16			0.00E+00			0.00E+00			0.00E+00																									
Acetaldehyde	lb/yr				0.00E+00	13.07	13.07			0.00E+00	13.37	13.37		0.00E+00			0.00E+00			0.00E+00																									
Acetic Acid	lb/yr				0.00E+00	0.00E+00				0.00E+00	0.00E+00			0.00E+00			0.00E+00			0.00E+00																									
Acetophenone	lb/yr				0.00E+00	0.34				0.00E+00	0.35			0.00E+00			0.00E+00			0.00E+00																									
Acrolein	lb/yr				0.00E+00	6.65	6.65			0.00E+00	6.80	6.80		0.00E+00			0.00E+00			0.00E+00																									
Ammonia	lb/yr	1,895.82			1,895.82	1,849.93			1,849.93		1,849.93	102.13		102.13	281.23		281.23	120.92		120.92								5.82E-03		0.09	2.06E-04	3.78E-04						7.67E-04							
Antimony	lb/yr		0.00E+00	0.00E+00	0.18	0.18		0.00E+00	0.00E+00	0.19	0.19		0.00E+00	0.00E+00		0.00E+00	0.00E+00		0.00E+00	0.00E+00																									
Arsenic	lb/yr	0.12	0.00E+00	0.00E+00	0.17	0.29	0.12	0.00E+00	0.00E+00	0.17	0.29	6.38E-03		6.38E-03	0.02		7.56E-03	0.00E+00	7.56E-03																					2.95E-03	3.89E-03	1.05E-04	1.92E-04	3.89E-04	
Benzene	lb/yr	1.24	0.00E+00	0.00E+00	29.81	31.06	1.21	0.00E+00	0.00E+00	30.49	31.71	0.07	0.00E+00	0.07	0.18	0.00E+00	0.18	0.08	0.00E+00	0.08																									
Benzof(a)pyrene	lb/yr				8.71E-04	8.71E-04			8.91E-04	8.91E-04				0.00E+00			0.00E+00			0.00E+00																					1.90E-04	1.83E-04	6.73E-06	1.23E-05	2.50E-05
Benzyl Chloride	lb/yr				16.05	16.05			16.42	16.42				0.00E+00			0.00E+00			0.00E+00																									
Beryllium	lb/yr	7.11E-03	0.00E+00	0.00E+00	0.03	0.04	6.94E-03	0.00E+00	0.00E+00	0.03	0.04	3.83E-04	0.00E+00	3.83E-04	1.05E-03	0.00E+00	1.05E-03	4.53E-04	0.00E+00	4.53E-04																					2.21E-03	2.92E-03	7.86E-05	1.44E-04	2.92E-04
Biphenyl	lb/yr				0.04	0.04			0.04	0.04				0.00E+00			0.00E+00			0.00E+00																									
Bis(2-ethylhexyl)phthalate (DEHP)	lb/yr				1.67	1.67			1.71	1.71				0.00E+00			0.00E+00			0.00E+00																									
Bromine	lb/yr				4.65	4.65			4.75	4.75				0.00E+00			0.00E+00			0.00E+00																									
Bromoform	lb/yr				0.89	0.89			0.91	0.91				0.00E+00			0.00E+00			0.00E+00																									
Cadmium	lb/yr	0.65	0.00E+00	0.00E+00	0.08	0.73	0.64	0.00E+00	0.00E+00	0.08	0.72	0.04	0.00E+00	0.04	0.10	0.00E+00	0.10	0.04	0.00E+00	0.04																									
Carbon Disulfide	lb/yr				2.98	2.98			3.05	3.05				0.00E+00			0.00E+00			0.00E+00																									
Chlorine	lb/yr				0.00E+00	61.21	61.21			0.00E+00	62.58	62.58																																	
Chlorobenzene	lb/yr				0.50	0.50			0.52	0.52				0.00E+00			0.00E+00			0.00E+00																									
Chloroform	lb/yr				1.35	1.35			1.38	1.38				0.00E+00			0.00E+00			0.00E+00																									
Chromium	lb/yr	0.83	0.00E+00	0.00E+00	2.72	3.55	0.81	0.00E+00	0.00E+00	2.78	3.59	0.04	0.00E+00	0.04	0.12	0.00E+00	0.12	0.05	0.00E+00	0.05																									
Chromic Acid VI	lb/yr	0.83	0.00E+00	0.00E+00	5.44E-03	0.83	0.81	0.00E+00	0.00E+00	5.56E-03	0.81	0.04	0.00E+00	0.04	0.12	0.00E+00	0.12	0.05	0.00E+00	0.05																									
Cobalt	lb/yr	0.05	0.00E+00	0.																																									



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2021 Annual Emissions Inventory

Pollutant	Units	Lineberger Addition Emergency Generator	McGavran Greenberg Emergency Generator	Morehead Planetarium Emergency Generator	Phillips Hall Emergency Generator	Dean Smith Center 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	Hydrated Lime Storage Silos	Hydrated Lime Weigh Hopper	Fuel Oil Storage Tanks Manning	Fuel Oil Storage Tanks Cogen	2021 Total
Criteria Pollutants																							
PM	tpy	2.35E-03	7.49E-04		1.39E-03	4.88E-03	9.20E-04	1.20E-03	1.80E-03	1.80E-03	1.50E-03	1.28E-03	2.79E-03	2.99E-03	2.64E-03	2.14E-03	0.04	4.65E-03	4.18E-04	4.18E-04			8.37
PM-10	tpy	2.35E-03	7.49E-04		1.39E-03	4.88E-03	9.20E-04	1.20E-03	1.80E-03	1.80E-03	1.50E-03	1.28E-03	2.79E-03	2.99E-03	2.64E-03	2.14E-03	0.04	4.65E-03	4.18E-04	4.18E-04			8.36
PM-2.5	tpy	2.35E-03	7.49E-04		1.39E-03	4.88E-03	9.20E-04	1.20E-03	1.80E-03	1.80E-03	1.50E-03	1.28E-03	2.79E-03	2.99E-03	2.64E-03	2.14E-03	0.04	4.65E-03	3.97E-04	3.97E-04			8.29
NOx	tpy	0.04	0.01	5.55E-03	0.03	0.07	0.01	0.02	0.03	0.03	0.02	0.02	0.04	0.04	0.04	0.03	0.58	0.06			0.02	0.22	158.58
VOC	tpy	1.92E-03	6.13E-04	4.07E-04	1.14E-03	5.67E-03	1.07E-03	9.82E-04	1.47E-03	1.14E-03	1.23E-03	1.05E-03	3.24E-03	3.47E-03	3.06E-03	2.48E-03	0.03	3.36E-03					4.51
CO	tpy	0.02	6.37E-03	2.31E-03	0.01	0.01	2.82E-03	0.01	0.02	0.02	0.01	0.01	8.54E-03	9.15E-03	8.08E-03	6.56E-03	0.48	0.05					78.74
SO2	tpy	3.56E-05	1.13E-05	1.84E-07	2.11E-05	2.39E-05	4.50E-06	1.82E-05	2.72E-05	2.72E-05	2.27E-05	1.95E-05	1.36E-05	1.46E-05	1.29E-05	1.05E-05	3.45E-03	3.67E-04					204.04
Greenhouse Gases																							
CO2	tpy	3.83	1.22	0.25	2.27	2.57	0.48	1.95	2.93	2.93	2.44	2.09	1.47	1.57	1.39	1.13	690.84	73.37					221,014.03
Methane	tpy	1.55E-04	4.95E-05	4.76E-06	9.20E-05	1.04E-04	1.96E-05	7.93E-05	1.19E-04	1.19E-04	9.91E-05	8.49E-05	5.94E-05	6.37E-05	5.63E-05	4.56E-05	0.01	1.38E-03					15.44
Nitrous Oxide	tpy	3.10E-05	9.91E-06	4.76E-07	1.84E-05	2.08E-05	3.93E-06	1.59E-05	2.38E-05	2.38E-05	1.98E-05	1.70E-05	1.19E-05	1.27E-05	1.13E-05	9.13E-06	1.30E-03	1.38E-04					2.18
HAPs/TAPs																							
1,3 Butadiene	lb/yr					1.23E-03	2.32E-04						7.03E-04	7.53E-04	6.65E-04	5.40E-04							0.04
2,3,7,8-TCDD	lb/yr																						6.63E-07
2,4-Dinitrotoluene	lb/yr																						0.01
2-Chloroacetophenone	lb/yr																						0.32
Acetaldehyde	lb/yr	1.18E-03	3.78E-04		7.01E-04	0.02	4.55E-03	6.04E-04	9.06E-04	9.06E-04	7.55E-04	6.47E-04	0.01	0.01	0.01	0.01							27.36
Acetic Acid	lb/yr																						0.00E+00
Acetophenone	lb/yr																						0.70
Acrolein	lb/yr	3.70E-04	1.18E-04		2.19E-04	2.91E-03	5.49E-04	1.89E-04	2.83E-04	2.83E-04	2.36E-04	2.02E-04	1.66E-03	1.78E-03	1.57E-03	1.28E-03							13.58
Ammonia	lb/yr																						4,250.02
Antimony	lb/yr																						0.37
Arsenic	lb/yr	1.88E-04	5.99E-05		1.11E-04	1.26E-04	2.38E-05	9.59E-05	1.44E-04	1.44E-04	1.20E-04	1.03E-04	7.19E-05	7.70E-05	6.81E-05	5.52E-05							0.63
Benzene	lb/yr	0.04	0.01		0.02	0.03	5.54E-03	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.02	2.57E-03					66.50
Benzo(a)pyrene	lb/yr	1.21E-05	3.85E-06		7.15E-06	5.92E-06	1.12E-06	6.16E-06	9.24E-06	9.24E-06	7.70E-06	6.60E-06	3.38E-06	3.62E-06	3.20E-06	2.59E-06	1.38E-05	1.47E-06					2.76E-03
Benzyl Chloride	lb/yr																						32.47
Beryllium	lb/yr	1.41E-04	4.49E-05		8.35E-05	9.45E-05	1.78E-05	7.19E-05	1.08E-04	1.08E-04	8.99E-05	7.70E-05	5.39E-05	5.78E-05	5.10E-05	4.14E-05							0.09
Biphenyl	lb/yr																						0.08
Bis(2-ethylhexyl)phthalate (DEHP)	lb/yr																						3.39
Bromine	lb/yr																						9.40
Bromoform	lb/yr																						1.81
Cadmium	lb/yr	1.41E-04	4.49E-05		8.35E-05	9.45E-05	1.78E-05	7.19E-05	1.08E-04	1.08E-04	8.99E-05	7.70E-05	5.39E-05	5.78E-05	5.10E-05	4.14E-05							1.63
Carbon Disulfide	lb/yr																						6.03
Chlorine	lb/yr																						123.80
Chlorobenzene	lb/yr																						1.02
Chloroform	lb/yr																						2.74
Chromium	lb/yr	1.41E-04	4.49E-05		8.35E-05	9.45E-05	1.78E-05	7.19E-05	1.08E-04	1.08E-04	8.99E-05	7.70E-05	5.39E-05	5.78E-05	5.10E-05	4.14E-05							7.37
Chromic Acid VI	lb/yr	1.41E-04	4.49E-05		8.35E-05	9.45E-05	1.78E-05	7.19E-05	1.08E-04	1.08E-04	8.99E-05	7.70E-05	5.39E-05	5.78E-05	5.10E-05	4.14E-05							1.88
Cobalt	lb/yr																9.67E-04	1.03E-04					0.43
Cumene	lb/yr																						0.25
Cyanide	lb/yr																						115.97
Dibenzofurans	lb/yr																						9.32E-03
Dichlorobenzene	lb/yr																						1.59
Dimethyl Sulfate	lb/yr																						2.23
Ethyl Benzene	lb/yr																						4.36
Ethyl Chloride	lb/yr																						1.95
Ethylene Dibromide	lb/yr																						0.06
Ethylene Dichloride	lb/yr																						1.86
Ethylene Glycol	lb/yr																						0.00E+00
Ethylene Oxide	lb/yr																						2.13
Fluoride	lb/yr																						0.00E+00
Formaldehyde	lb/yr	3.70E-03	1.18E-03		2.20E-03	0.04	7.01E-03	1.89E-03	2.84E-03	2.84E-03	2.36E-03	2.03E-03	0.02	0.02	0.02	0.02	0.86	0.09					177.53
Glycol Ethers	lb/yr																						0.00E+00
Hexane	lb/yr																20.72	2.20					2,416.67
Hydrogen Chloride	lb/yr																						20,114.93
Hydrogen Fluoride	lb/yr																						263.64
Isothorone	lb/yr																						26.90
Lead	lb/yr	4.22E-04	1.35E-04		2.50E-04	2.84E-04	5.34E-05	2.16E-04	3.24E-04	3.24E-04	2.70E-04	2.31E-04	1.62E-04	1.73E-04	1.53E-04	1.24E-04	5.76E-03	6.11E-04					2.72
Manganese	lb/yr	2.82E-04	8.99E-05		1.67E-04	1.89E-04	3.56E-05	1.44E-04	2.16E-04	2.16E-04	1.80E-04	1.54E-04	1.08E-04	1.16E-04	1.02E-04	8.28E-05							14.28
Mercury	lb/yr	1.41E-04	4.49E-05		8.35E-05	9.45E-05	1.78E-05	7.19E-05	1.08E-04	1.08E-04	8.99E-05	7.70E-05	5.39E-05	5.78E-05	5.10E-05	4.14E-05							0.38
Methyl Chloride	lb/yr																						24.59
Methyl Ethyl Ketone	lb/yr																						18.09
Methyl Bromide	lb/yr																						7.42
Methyl Chloroform/ 1, 1, 1 Trichloroethane																							