COPY of RECORD Date Submitted: 6/26/2023 15:51:53

Inventory Certification Form(Title V)
Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

These forms must be completed and returned even if the facility did not operate or emissions were zero

The legally defined "Responsible Official" of record for your facility is George Battle, III
This person or one that meets the definition below must sign this certification form.

The official submitting the information must certify that he/she complies with the requirements as specified in Title 15A NCAC 2Q.0520(b) which references and follows the federal definition. 40 CFR Part 70.2 defines a responsible as meaning one of the following:

1. For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the overall operation of one or more manufacturing, production, or operating facilities applying for a or subject to a permit and either
   i. the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million(in second quarter 1980 dollars); or
   ii. the delegation of authority to such representatives is approved in advance by the permitting authority;
2. For partnership or sole proprietorship; a general partner or the proprietor, respectively;
3. For a municipality, state, federal, or other public agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA).

CERTIFICATION STATEMENT: **(Important: Legally Responsible Official, read and sign after all submissions are final.)**
I certify that I am the responsible official for this facility, as described above, and hereby certify that the information contained in this air emissions report, including attached calculations and documentation, is true, accurate and complete. (Subject to legal penalties of up to $25,000 per occurrence and possible imprisonment as outlined in G.S. § 143-215.3(a)(2))
Responsible Official's Signature Below (**use blue ink**): Date Signed:
Printed Name: George Battle, III Signature:

This form applies to Title V facilities. If this facility is not classified asTitle V, please telephone your regional office Emission Inventory Contact at once for proper forms.

Email address of Responsible Official: GBattle@ad.unc.edu

Information on this Form cannot be held confidential

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Listing of Emission Sources and Control Devices on Permit. See instructions

*ES ID on Air Permit	*ES Description	*CS ID	*CS Description	* CD ID's
ES-001-Boiler #6	One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]	CS-11	Calcium carbonate injection system , Dry Sorbent Injection System , One bagfilter with 36,614 square feet of filter surface area	CD-004.1, CD-005.3, CD-004.2
ES-002-Boiler #7	One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]	CS-12	Calcium carbonate injection system , Dry Sorbent Injection System , One bagfilter with 36,614 square feet of filter surface area	CD-005.1, CD-005.3, CD-005.2
ES-003-Boiler #8	One natural gas/No. 2 fuel oil-fired boiler, 338 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]			
ES-004-Boiler #9	One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]			
ES-005-Boiler #10	One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]			
ES-006	One No. 2 fuel oil-fired, compression ignition generator (2000 kW) located at the Cogeneration Facility [MACT ZZZZ, PSD {51.1666 (a) through (i) and (s)}]			
ES-007	One No. 2 fuel oil-fired, compression ignition generator (2000 kW) located at the Cogeneration Facility [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]			
ES-010.1	One enclosed railcar dump pit [NSPS Y]	CS-3	Wet spray dust suppression systems (100 gal per min. injection rate in each hopper)	CD-018
ES-010.2	One enclosed railcar dump pit [NSPS Y]	CS-3	Wet spray dust suppression systems (100 gal per min. injection rate in each hopper)	CD-018
ES-010.3	One enclosed railcar dump pit [NSPS Y]	CS-3	Wet spray dust suppression systems (100 gal per min. injection rate in each hopper)	CD-018

ES-010A	One coal crusher building [NSPS Y]	CS-7	Bagfilter with 1330 square feet of filter surface area	CD-013
ES-030	One ash storage silo equipped with dry loadout system	CS-8	Bagfilter with 577 square feet of filter surface area	CD-031
ES-030A	Enclosed wet ash loadout system	CS-9	Water injection system (8.64 gal per min. injection rate)	CD-032
ES-1	One coal silo [NSPS Y]	CS-10	Bagfilter with 533 square feet of filter surface area , Bagfilter with 533 square feet of filter surface area	CD-011, CD-012
ES-2	One coal silo [NSPS Y]	CS-10	Bagfilter with 533 square feet of filter surface area , Bagfilter with 533 square feet of filter surface area	CD-011, CD-012
ES-3.1	One silo feed conveyor [NSPS Y]	CS-6	Bagfilter with 1598 square feet of filter surface area	CD-019
ES-3.2	One silo feed conveyor [NSPS Y]	CS-6	Bagfilter with 1598 square feet of filter surface area	CD-019
ES-3.3	One silo feed conveyor [NSPS Y]	CS-6	Bagfilter with 1598 square feet of filter surface area	CD-019
ES-3.4	One silo feed conveyor [NSPS Y]	CS-6	Bagfilter with 1598 square feet of filter surface area	CD-019
ES-3.5	One silo feed conveyor [NSPS Y]	CS-6	Bagfilter with 1598 square feet of filter surface area	CD-019
ES-EG#1	One diesel-fired emergency generator (900 kW), located at the EPA Building [MACT ZZZZ]			
ES-EG#10	One diesel-fired emergency generator (800 kW) located at Bondurant Hall [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]			
ES-EG#11	One diesel-fired emergency generator (1,750 kW) located at Burnett-Womack Building [MACT ZZZZ, PSD {40 CFR 51.116 (a) though (i) and (s)}]			
ES-EG#12	One diesel-fired emergency generator (1,250 kW) located at the Mary Ellen Jones Building [MACT ZZZZ, PSD {40 CFR 51.166 (a) through (i) and (s)}]			
ES-EG#13	One diesel-fired emergency generator (2,000 kW) located at the Genetic Medicine Building [MACT ZZZZ, NSPS IIII, PSD {40 CFR 51.166 (a) through (i) and (s)}]			
ES-EG#14	One diesel-fired emergency generator (900 kW) located at the 440 West Franklin Building [MACT ZZZZ, PSD {40 CFR 51.166 (a) through (i) and (s)}]			
ES-EG#15	One diesel-fired emergency generator (2,000 kW) located at the Rams Head Center [MACT ZZZZ, PSD {40 CFR 51.666 (a) through (i) and (s)}]			
ES-EG#16	One diesel-fired emergency generator (2,000 kW) located at the ITS Building [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]			
ES-EG#17	One diesel-fired emergency generator (1,000 kW) located at the Brinkhous-Bullitt Building [MACT ZZZZ, NSPS IIII]			

ES-EG#18	One diesel-fired emergency generator (1,000 kW) located at Venable Hall [MACT ZZZZ, NSPS III]			
ES-EG#19	One diesel-fired emergency generator (2,500 kW) located at the Imaging Research Building [MACT ZZZZ, NSPS IIII]			
ES-EG#2	One diesel-fired emergency generator (1,600 kW), located at the Thurston Bowles Building [MACT ZZZZ]			
ES-EG#20	One diesel-fired emergency generator (2,000 kW) located at the Genomic Science Building [MACT ZZZZ, NSPS IIII]			
ES-EG#21	One diesel-fired emergency generator (1,250 kW) located at the Dental Research Building. [MACT ZZZZ, NSPS IIII]			
ES-EG#3	One diesel-fired emergency generator (728 kW), located at the Lineberger Cancer Research Building [MACT ZZZZ]			
ES-EG#4	One diesel-fired emergency generator (1,000 kW) located at Taylor Hall [MACT ZZZZ]			
ES-EG#5	One diesel-fired emergency generator (910 kW) located at the Neuroscience Research Building [MACT ZZZZ]			
ES-EG#6	One diesel-fired emergency generator (1,500 kW) located at the Medical Biomolecular Research Building [MACT ZZZZ]			
ES-EG#7	One diesel-fired emergency generator (1,250 kW) located at the Michael Hooker Research Center [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]			
ES-EG#8	One diesel-fired emergency generator (800 kW) located at Chapman Hall [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]			
ES-EG#9	One diesel-fired emergency generator (1,000 kW) located at the Caudill Labs [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]			
ES-FP-1	Fire water pump (77 hp, diesel-fired), located at Kenan Stadium [MACT ZZZZ, NSPS IIII]			
ES-FP-2	Fire water pump (110 hp, diesel-fired), located at McColl Building [MACT ZZZZ]			
ES-FP-3	Fire water pump (123 hp, diesel-fired), located at Davis Library [MACT ZZZZ, NSPS IIII]			
ES-Gen-1	Emergency generator (25 kW, diesel-fired), located at Ackland Art Museum [MACT ZZZZ]			
ES-Gen-10	Emergency generator (25 kW, diesel-fired), located at the Center for Dramatic Art [MACT ZZZZ]			

ES-Gen-11	Emergency generator (250 kW, diesel-fired), located at Craige Dorm [MACT ZZZZ]			
ES-Gen-12	Emergency generator (150 kW, diesel-fired), located at Craige Parking Deck [MACT ZZZZ, NSPS III]			
ES-Gen-13	Emergency generator (300 kW, diesel-fired), located at the Davie Hall [MACT ZZZZ, NSPS IIII]			
ES-Gen-14	Emergency generator (210 kW, diesel-fired), located at the Davis Library [MACT ZZZZ]			
ES-Gen-15	Emergency generator (250 kW, diesel-fired), located at the Ehringhaus Dorm [MACT ZZZZ]			
ES-Gen-18	Emergency generator (150 kW, diesel-fired), located at Fetzer Gym [MACT ZZZZ]			
ES-Gen-19	Emergency generator (125 kW, diesel-fired), located at Fordham Hall [MACT ZZZZ]			
ES-Gen-2	Emergency generator (500 kW, diesel-fired), located at Ambulatory Care Center [MACT ZZZZ]			
ES-Gen-20	Emergency generator (150 kW, diesel-fired), located at Cardinal Deck [MACT ZZZZ]			
ES-Gen-21	Emergency generator (40 kW, natural gas-fired), located at the Old Dental School Building [MACT ZZZZ]			
ES-Gen-22	Emergency generator (100 kW, diesel-fired), located at Hill Alumni Center [MACT ZZZZ]			
ES-Gen-23	Emergency generator (250 kW, diesel-fired), located at Hinton James Dorm [MACT ZZZZ]			
ES-Gen-24	Emergency generator (80 kW, diesel-fired), located at Kenan Center [MACT ZZZZ]			
ES-Gen-25	Emergency generator (25 kW, diesel-fired), located at Kenan Field (North) [MACT ZZZZ]			
ES-Gen-26	Emergency generator (30 kW, diesel-fired), located at the Kenan Field (North-new) [MACT ZZZZ]			
ES-Gen-27	Emergency generator (25 kW, diesel-fired), located at Kenan Field (South) [MACT ZZZZ]			
ES-Gen-28	Emergency generator (100 kW, diesel-fired), located at Kenan Football Center [MACT ZZZZ]			
ES-Gen-3	Emergency generator (30 kW, diesel-fired), located at Avery Dorm [MACT ZZZZ]			
ES-Gen-30	Emergency generator (535 kW, diesel-fired) located at the Lineberger Building Addition [MACT ZZZZ]			
ES-Gen-33	Emergency generator (750 kW, diesel-fired), located at the McColl Building [MACT ZZZZ, NSPS IIII]			

ES-Gen-35	Emergency generator (125 kW, diesel-fired), located at the Morehead Chemistry Lab [MACT ZZZZ]			
ES-Gen-36	Emergency generator (30 kW, natural gas-fired), located at the Morehead Planetarium [MACT ZZZZ]			
ES-Gen-37	Emergency generator (250 kW, diesel-fired), located at Morrison Dorm [MACT ZZZZ]			
ES-Gen-39	Emergency generator (60 kW, diesel-fired), located at Parker Dorm [MACT ZZZZ]			
ES-Gen-4	Emergency generator (20 kW, diesel-fired), located at the Cheek/Clark Building [MACT ZZZZ]			
ES-Gen-40	Emergency generator (500 kW, diesel-fired), located at Phillips Hall [MACT ZZZZ]			
ES-Gen-41	Emergency generator (20 kW, diesel-fired), located at Security Services Building [mact zzzz]			
ES-Gen-42	Emergency generator (400kW, diesel-fired), located at the Dean Smith Center [MACT ZZZZ, NSPS IIII]			
ES-Gen-43	Emergency generator (125 kW, diesel-fired), located at the Medical Research Building B [MACT ZZZZ, NSPS IIII]			
ES-Gen-44	Emergency generator (275 kW, diesel-fired), located at Tarrson Hall [MACT ZZZZ]			
ES-Gen-45	Emergency generator (150 kW, diesel-fired), located at Tate-Turner-Kuralt Building [MACT ZZZZ]			
ES-Gen-46	Emergency generator (260 kW, diesel-fired), located at Taylor Student Health Services [MACT ZZZZ]			
ES-Gen-47	Emergency generator (50 kW, diesel-fired), located at Van Hecke-Wettach Hall [MACT ZZZZ]			
ES-Gen-48	Emergency generator (500 kW, diesel-fired), located at Kenan Stadium [MACT ZZZZ, NSPS IIII]			
ES-Gen-49	Emergency generator (230 kW, diesel-fired), located at the Wilson Library Stacks [MACT ZZZZ, NSPS IIII]			
ES-Gen-50	Emergency generator (600 kW, diesel-fired) located at Beard Hall [MACT ZZZZ]			
ES-Gen-57	Emergency generator (600 kW, diesel-fired), located at the Bioinformatics Building [MACT ZZZZ]			
ES-Gen-58	Emergency generator (230 kW, diesel-fired), located at the Carrington Building [MACT ZZZZ]			

ES-Gen-59	Emergency generator (500 kW, diesel-fired) located at the Glaxo Building [MACT ZZZZ]			
ES-Gen-60	Emergency generator (148 kW, diesel-fired), located at the Health Sciences Library [MACT ZZZZ]			
ES-Gen-61	Emergency generator (60 kW, diesel-fired), located at the Knapp Building [MACT ZZZZ]			
ES-Gen-62	Emergency generator (300 kW, diesel-fired), located at the RB House Library [MACT ZZZZ]			
ES-Gen-67	Emergency generator (125 kW, diesel-fired), located at Memorial Hall [MACT ZZZZ]			
ES-Gen-68	Emergency generator (105 kW, diesel-fired), located at the Dogwood Deck [MACT ZZZZ]			
ES-Gen-7	Emergency generator (35 kW, diesel-fired), located at Security Services Buildling [MACT ZZZZ]			
ES-Gen-71	Emergency generator (110 kW, diesel-fired), located at the Global Education Building [MACT ZZZZ, NSPS IIII]			
ES-Gen-72	Emergency generator (30 kW, diesel-fired), located at the Hamilton Hall [MACT ZZZZ, NSPS IIII]			
ES-Gen-74	Emergency generator (250 kW, diesel-fired), located at the Joyner, Alexander Dorms [MACT ZZZZ]			
ES-Gen-75	Emergency generator (250 kW, diesel-fired), located at the McIver, Kenan, Alderman Dorms [MACT ZZZZ]			
ES-Gen-76	Emergency generator (500 kW, diesel-fired), located at the Northeast Chiller [MACT ZZZZ]			
ES-Gen-77	Emergency generator (100 kW, diesel-fired), located at the Jackson Circle Parking Deck [MACT ZZZZ]			
ES-Gen-79	Emergency generator (300 kW, diesel-fired), located at the Carmichael Auditorium [MACT ZZZZ, NSPS IIII]			
ES-Gen-8	Emergency generator (350 kW, diesel-fired), located at Carmichael Dorm [MACT ZZZZ]			
ES-Gen-80	Emergency generator (300 kW, diesel-fired), located at the Hinton James Dorm [MACT ZZZZ, NSPS IIII]			
ES-Gen-81	Emergency generator (250 kW, diesel-fired), located at the Physicians Office Building [MACT ZZZZ, NSPS IIII]			
ES-Gen-84	Emergency generator (250 kW, diesel-fired), located at Bell Tower Parking Deck [MACT ZZZZ, NSPS IIII]			

ES-Gen-9	Emergency generator (60 kW, diesel-fired), located at Carolina Inn [MACT ZZZZ]			
ES-T-001	One No. 2 fuel oil storage tank (500,000 gallon capacity)			
ES-T-002	One No. 2 fuel oil storage tank (500,000 gallon capacity)			
ES-T-003	One No. 2 fuel oil storage tank (184,900 gallon capacity) located at the Manning Drive Steam Plant			
ES-T-004	One No. 2 fuel oil storage tank (184,900 gallon capacity) located at the Manning Drive Steam Plant			
IES-51	Sterilizers - Dental School			
IES-53	Enclosed sorbent railcar dump pit, located in the Railcar Unloading Building (ID No. 020)			
IES-Gen-31	Emergency generator (500kW, diesel-fired), located at the McGavran Greenberg Building [MACT ZZZZ]			
IES-SB-1	Water heater (0.726 million Btu per hour; natural gas-fired), located at Aycock Family Medical Center			
IES-SB-11	Water heater (0.450 million Btu per hour; natural gas-fired), located at Hickerson House			
IES-SB-12	Water heater (0.595 million Btu per hour; natural gas-fired), located at Hill Commercial			
IES-SB-13	Water heater (0.270 million Btu per hour; natural gas-fired), located at Hill Annex			
IES-SB-14	Water heater (0.500 million Btu per hour; natural gas-fired), located at Medical Research Building B			
IES-SB-16	Water heater (0.900 million Btu per hour; natural gas-fired), located at McCaskill Soccer			
IES-SB-17	Water heater (0.900 million Btu per hour; natural gas-fired), located at 135.5 East Franklin			
IES-SB-19	Sorbent Storage Silo with a bin vent filter, located at Cogeneration Facility			
IES-SB-2	Water heater (0.726 million Btu per hour; natural gas-fired), located at Aycock Family Medical Center			
IES-SB-20	Weigh/Feed Hopper with bin vent filters, blowers, piping and injection nozzles, located at Cogeneration Facility			
IES-SB-21	Weigh/Hopper with bin vent filters, blowers, piping and injection nozzles, located at Cogeneration Facility			
IES-SB-3	Water heater (0.300 million Btu per hour; natural gas-fired), located at Aycock Family Medical Center			
IES-SB-4	Water heater (0.399 million Btu per hour; natural gas-fired), located at Brooks Hall			

IES-SB-5	Water heater (1.442 million Btu per hour; natural gas-fired), located at Cheek Clark Building			
IES-SB-6	One natural gas-fired boiler at Davie Hall; 2.52 million Btu per hour heat input capacity [MACT DDDDD]			
IES-SB-7	Water heater (0.420 million Btu per hour; natural gas-fired), located at Graham Memorial Building			
IES-SB-8	Water heater (0.420 million Btu per hour; natural gas-fired), located at Graham Memorial Building			

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Emission Source & Operating Scenario List - See Instructions

*ES Group ID	*ES ID	*OS ID	*OS Description
GR17	ES-006, ES-007	95	Two No.2 Fuel Oil-Fired 2,000 kW Generators at the Cogeneration Facility
GR19	ES-T-003, ES-T-004	97	Two 184,200 gallon No.2 fuel oil storage tanks at the Manning Drive Steam Plant
GR20	IES-SB-1, IES-SB-11, IES-SB-12, IES-SB-13, IES-SB-14, IES-SB-16, IES-SB-17, IES-SB-2, IES-SB-3, IES-SB-4, IES-SB-5, IES-SB-7, IES-SB-8	123	13 Insignificant Natural Gas-Fired Boilers/Hotwater Heaters
G-80	ES-Gen-62, ES-Gen-67, ES-Gen-68, ES-Gen-7, ES-Gen-71, ES-Gen-72, ES-Gen-74, ES-Gen-75, ES-Gen-77, ES-Gen-8, ES-Gen-9, ES-Gen-1, ES-Gen-10, ES-Gen-11, ES-Gen-12, ES-Gen-14, ES-Gen-15, ES-Gen-18, ES-Gen-19, ES-Gen-20, ES-Gen-22, ES-Gen-23, ES-Gen-24, ES-Gen-25, ES-Gen-26, ES-Gen-27, ES-Gen-28, ES-Gen-3, ES-Gen-33, ES-Gen-35, ES-Gen-37, ES-Gen-39, ES-Gen-4, ES-Gen-41, ES-Gen-44, ES-Gen-45, ES-Gen-46, ES-Gen-47, ES-Gen-49, ES-Gen-58, ES-Gen-60, ES-Gen-61	125	Grouped small emergency generators
G-81	ES-010.1, ES-010.2, ES-010.3	12	Three enclosed railcar dump pits
G-82	ES-1, ES-2	13	Two Coal Storage Silos
G-83	ES-3.1, ES-3.2, ES-3.3, ES-3.4, ES-3.5	27	Silo Conveyors
G-84	ES-T-001, ES-T-002	28	Two 500,000 gal. Fuel Oil Storage Tanks
		29	T-002 500,000 gal. Fuel Oil Storage Tank
	ES-001-Boiler #6	4	[NSPS] One coal-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
		5	[NSPS] One natural gas-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
		30	[NSPS] One No. 2 fuel oil-fired, circulating fluidized combustion boiler,

			323.17 million Btu heat input capacity.
		110	OS-110[NSPS] One wood pellet-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
	ES-002-Boiler #7	7	[NSPS] One coal-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
		8	[NSPS] One natural gas-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
		31	[NSPS] One No. 2 fuel oil-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
		111	OS-111/[NSPS] One wood-pellet-fired circulating fluidized combustion boiler, 323.17 million Btu heat input capacity
	ES-003-Boiler #8	10	[NSPS/PSD] One natural gas-fired boiler, 338 million Btu per hour heat input capacity
		11	[NSPS/PSD] One No. 2 fuel oil-fired boiler, 338 million Btu per hour heat input capacity
	ES-004-Boiler #9	49	One No.2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity
		78	One natural gas-fired boiler, 249 million Btu per hour heat capacity
	ES-005-Boiler #10	50	One No.2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity
		77	One natural gas-fired boiler, 249 million Btu per hour heat input capacity
	ES-010A	14	[NSPS] One coal crusher building
	ES-030	15	One ash storage silo equipped with dry loadout system
	ES-030A	16	Enclosed wet ash loadout system
	ES-EG#1	18	One diesel-fired emergency generator (900 kW), located at the EPA Building
	ES-EG#10	41	One diesel-fired emergency generator (800 kW) located at Bondurant Hall
	ES-EG#11	42	One diesel-fired emergency generator (1,750 kW) located at the Burnett-Womack Building
	ES-EG#12	55	One diesel-fired emergency generator (1,250 kW) located at the Mary Ellen Jones Building
	ES-EG#13	56	One diesel-fired emergency generator (2,000 kW) located at the Genetic Medicine Building
	ES-EG#14	57	One diesel-fired emergency generator (900 kW) located at the 440 W. Franklin Building
	ES-EG#15	71	One diesel-fired emergency generator (2,000 kW) located at the Rams Head Center
	ES-EG#16	72	One diesel-fired emergency generator (2,000 kW) located at the ITS Building
	ES-EG#17	98	One diesel-fired emergency generator (1000KW) located at the Brinkhous-Bullit Building.
	ES-EG#18	104	1,000 kW Diesel-fired Emergency Generator at Venable Hall

	ES-EG#19	105	one diesel-fired emergency generator (2,500 kW) located at Imaging Research
	ES-EG#2	19	One diesel-fired emergency generator (1600 kW), located at the Thurston Bowles Building
	ES-EG#20	106	One diesel-fire emergency generator (2,000 kW) located at the Genomic Science Building
	ES-EG#21	113	1,350 kW Emergency Generator at the Dental Research Building
	ES-EG#3	20	One diesel-fired emergency generator (728 kW), located at the Lineberger Cancer Research Building
	ES-EG#4	21	One diesel-fired emergency generator (1000 kW) located at Taylor Hall
	ES-EG#5	22	One diesel-fired emergency generator (910 kW) located at the Neuroscience Research Building
	ES-EG#6	23	One diesel-fired emergency generator (1500 kW) located at the Medical Biomolecular Research Building
	ES-EG#7	43	One diesel-fired emergency generator (1250 kW) located at the Michael Hooker Research Center
	ES-EG#8	44	One diesel-fired emergency generator (800 kW) located at Chapman Hall
	ES-EG#9	45	One diesel-fired emergency generator (1,000 kW) located at the Caudill Labs
	ES-FP-1	107	77 Hp Fire Pump at Kenan Stadium
	ES-FP-2	114	110 Hp Diesel Fire Pump at the McColl Building
	ES-FP-3	115	123 Hp Diesel Fire Pump at the Davis Library
	ES-Gen-13	122	300 kW diesel-fired emergency generator at Davie Hall
	ES-Gen-2	108	OS-108/[NSPS] One diesel-fired emergency generator (450 kW) located at the Ambulatory Care Center
	ES-Gen-21	82	One 40 kW natural gas-fired emergency generator located at the Old Dental School Building
	ES-Gen-30	84	One 535 kW diesel-fired emergency generator located at the Lineberger Building Addition
	ES-Gen-36	65	One natural gas-fired emergency generator (30 kW) located at the Morehead Planetarium
	ES-Gen-40	87	One 500 kW diesel-fired emergency generator located at Phillips Hall
	ES-Gen-42	126	One 400KW, diesel-fired generator located at the Dean Smith Center
	ES-Gen-43	116	125 kW Diesel-Fired Emergency Generator at Medical Research Building B
	ES-Gen-48	117	500 kW Diesel-Fired EFP Emergency Generator at Kenan Stadium
	ES-Gen-50	89	One 600 kW diesel-fired emergency generator located at Beard Hall
	ES-Gen-57	90	One 600 kW diesel-fired emergency generator located at the Bioinformatics Building

	ES-Gen-59	91	One 500 kW diesel-fired emergency generator located at the Glaxo Building
	ES-Gen-76	92	One 500 kW diesel-fired emergency generator located at the Northeast Chiller
	ES-Gen-79	99	One 400 kW diesel-fired emergency generator located at Carmichael Auditorium
	ES-Gen-80	100	One 350 kW diesel-fired emergency generator located at the Hinton James Dorm
	ES-Gen-81	101	One 250KW, diesel-fired generator located at the Physicians Office Building
	ES-Gen-84	109	250 kW Diesel-fired Emergency Generator at Bell Tower Parking Deck
	IES-51	25	Sterilizers - Dental School
	IES-53	17	Enclosed sorbent railcar dump pit, located in the Railcar Unloading Building
	IES-Gen-31	130	500 kW Diesel-Fired Emergency Generator at McGavran Greenberg Building
	IES-SB-19	127	Two Hydrated Lime Storage Silos
	IES-SB-20	128	Weigh Hopper with bin filters
	IES-SB-21	129	Weigh Hopper with bin filters
	IES-SB-6	119	2.52 MMBtu/hr Natural Gas-Fired Boiler at Davie Hall

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group GR17 consisting of ES-006, ES-007

2. Emission Source Description : Two 2,000 kW Generators at Cogen

3. Operating Scenario ID/ Description: OS - 95/Two No.2 Fuel Oil-Fired 2,000 kW Generators at the Cogeneration Facility

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 22668 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	3.97	%Ash	0	Heat Content (Btu/units)	134030 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
Gen1/2	VERTICAL STACK	49	1.67	890	120.78	15873.36	2 Gen Stacks

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (5) Days per Week (2) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**50%**	**March-May 2022**	**14%**	**June-Aug. 2022**	**20%**	**Sept.-Nov. 2022**	**16%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	247.69	08			
Methane (CH4)	**74-82-8**	0.01	08			
Nitrous Oxide (N2O)	**10024972**	0.002	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.39	24			
NOx	**NOx**	2.89	08			
TSP	**TSP**	0.15	08			
PM10	**PM10**	0.15	08			
PM2.5	**PM2.5**	0.15	08			
SO2	**SO2**	0.06	08			
VOC	**VOC**	0.12	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.07656	08			
Acrolein	**107-02-8**	0.02394	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.01215	08			
Benzene	**71-43-2**	2.35758	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00078	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00911	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00911	08			

Formaldehyde	**50-00-0**	0.23971	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.02734	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.01823	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00911	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.39495	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00911	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.64408	08			
Selenium Compounds	**SEC**	0.04557	08			
Toluene	**108-88-3**	0.85371	08			
Xylene	**1330-20-7**	0.58636	08			

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group GR19 consisting of ES-T-003, ES-T-004

2. Emission Source Description : Two 184,200 gallon No.2 oil tanks

3. Operating Scenario ID/ Description: OS - 97/Two 184,200 gallon No.2 fuel oil storage tanks at the Manning Drive Steam Plant

4. SCC Number/Description: 39090003/Fuel Storage - Fixed Roof Tanks ; Distillate Oil (No. 2): Breathing Loss

5. Throughput/units in 2022: (e.g. production or fuel use): 75080 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-Tk3&4	VERTICAL STACK	40	0.25	100	4.64	13.67	Two storage tank vents

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**	0.03	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Facility ID : 6800043
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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: Group GR20 consisting of IES-SB-1, IES-SB-11, IES-SB-12, IES-SB-13, IES-SB-14, IES-SB-16, IES-SB-17, IES-SB-2, IES-SB-3, IES-SB-4, IES-SB-5, IES-SB-7, IES-SB-8

2. Emission Source Description : 13 Small Boilers/Hotwater Heaters

3. Operating Scenario ID/ Description: OS - 123/13 Insignificant Natural Gas-Fired Boilers/Hotwater Heaters

4. SCC Number/Description: 10300602/Natural Gas ; 10-100 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 12291.66 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	1026 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-ISBs	VERTICAL STACK	4	0.667	200	4.86	102	Representative Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**29%**	**June-Aug. 2022**	**24%**	**Sept.-Nov. 2022**	**22%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	737.6	08			
Methane (CH4)	**74-82-8**	0.0139	08			
Nitrous Oxide (N2O)	**10024972**	0.0014	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.52	08			
NOx	**NOx**	0.61	08			
TSP	**TSP**	0.05	08			
PM10	**PM10**	0.05	08			
PM2.5	**PM2.5**	0.05	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0.03	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Benzene	**71-43-2**	0.02581	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.00103	08			
Formaldehyde	**50-00-0**	0.92187	08			
Hexane, n-	**110-54-3**	22.12499	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.0075	08			
Selenium Compounds	**SEC**	0.00029	08			
Toluene	**108-88-3**	0.04179	08			

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID

Group G-80 consisting of ES-Gen-62, ES-Gen-67, ES-Gen-68, ES-Gen-7, ES-Gen-71, ES-Gen-72, ES-Gen-74, ES-Gen-75, ES-Gen-77, ES-Gen-8, ES-Gen-9, ES-Gen-1, ES-Gen-10, ES-Gen-11, ES-Gen-12, ES-Gen-14, ES-Gen-15, ES-Gen-18, ES-Gen-19, ES-Gen-20, ES-Gen-22, ES-Gen-23, ES-Gen-24, ES-Gen-25, ES-Gen-26, ES-Gen-27, ES-Gen-28, ES-Gen-3, ES-Gen-33, ES-Gen-35, ES-Gen-37, ES-Gen-39, ES-Gen-4, ES-Gen-41, ES-Gen-44, ES-Gen-45, ES-Gen-46, ES-Gen-47, ES-Gen-49, ES-Gen-58, ES-Gen-60, ES-Gen-61

2. Emission Source Description : Small Emergency Generators

3. Operating Scenario ID/ Description: OS - 125/Grouped small emergency generators

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 8623.94 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
F1	FUGITIVE (NO STACK)		1	72		Area = 1	Emergency Generator Stacks

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	341.7094	08		79.2466919	
Methane (CH4)	**74-82-8**	0.0038	08			
Nitrous Oxide (N2O)	**10024972**	0.0008	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.55	08			
NOx	**NOx**	2.57	08			
TSP	**TSP**	0.18	08			
PM10	**PM10**	0.18	08			
PM2.5	**PM2.5**	0.18	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0.21	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.89297	08			
Acrolein	**107-02-8**	0.10769	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00466	08			
Benzene	**71-43-2**	1.08623	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00022	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00349	08			
Butadiene, 1,3-	**106-99-0**	0.04552	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00349	08			
Formaldehyde	**50-00-0**	1.37379	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.01048	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00699	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00349	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.09873	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00349	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.19559	08			
Selenium Compounds	**SEC**	0.01746	08			
Toluene	**108-88-3**	0.47617	08			
Xylene	**1330-20-7**	0.33181	08			

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group G-81 consisting of ES-010.1, ES-010.2, ES-010.3

2. Emission Source Description : Three enclosed railcar dump pits

3. Operating Scenario ID/ Description: OS - 12/Three enclosed railcar dump pits

4. SCC Number/Description: 30501011/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Coal Transfer

5. Throughput/units in 2022: (e.g. production or fuel use): 36745 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-3	CD-018	Wet spray dust suppression systems (100 gallon per minute injection rate in each hopper)

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
erp-rdp	DOWNWARD-FACING VENT	3	3	72	5	2121	erp for railcar dump pits

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (2) Days per Week (5) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**32%**	**March-May 2022**	**28%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**15%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08	0		
NOx	**NOx**		08	0		
TSP	**TSP**	0	08	67		
PM10	**PM10**	0	08	63		
PM2.5	**PM2.5**	0	08	40		
SO2	**SO2**		08	0		
VOC	**VOC**		08	0		

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group G-82 consisting of ES-1, ES-2

2. Emission Source Description : Two Coal Storage Silos

3. Operating Scenario ID/ Description: OS - 13/Two Coal Storage Silos

4. SCC Number/Description: 30501014/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Cleaned Coal Storage

5. Throughput/units in 2022: (e.g. production or fuel use): 36745 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-10	CD-011	One bagfilter with 533 square feet of filter surface area
2	CS-10	CD-012	One bagfilter with 533 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
12-028	HORIZONTAL STACK	140	0.9	72	61	2328.39	Coal Storage Emissions
12-036	HORIZONTAL STACK	140	0.9	72	61	2328.39	Coal Storage Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (2) Days per Week (5) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**32%**	**March-May 2022**	**28%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**15%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08	0		
NOx	**NOx**		08	0		
TSP	**TSP**	0	08	99.8		
PM10	**PM10**	0	08	99.6		
PM2.5	**PM2.5**	0	08	97.9		
SO2	**SO2**		08	0		
VOC	**VOC**		08	0		

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group G-83 consisting of ES-3.1, ES-3.2, ES-3.3, ES-3.4, ES-3.5

2. Emission Source Description : Silo Conveyors

3. Operating Scenario ID/ Description: OS - 27/Silo Conveyors

4. SCC Number/Description: 30501011/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Coal Transfer

5. Throughput/units in 2022: (e.g. production or fuel use): 36745 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-6	CD-019	One bagfilter with 1598 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
SC-1	VERTICAL STACK	200	2	72	45	8482.3	Silo Conveyor

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**32%**	**March-May 2022**	**28%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**15%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08	0		
NOx	**NOx**		08	0		
TSP	**TSP**	0	08	99.8		
PM10	**PM10**	0	08	99.6		
PM2.5	**PM2.5**	0	08	97.9		
SO2	**SO2**		08	0		
VOC	**VOC**		08	0		

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group G-84 consisting of ES-T-001, ES-T-002

2. Emission Source Description : Fuel Oil Storage Tanks

3. Operating Scenario ID/ Description: OS - 28/Two 500,000 gal. Fuel Oil Storage Tanks

4. SCC Number/Description: 39090003/Fuel Storage - Fixed Roof Tanks ; Distillate Oil (No. 2): Breathing Loss

5. Throughput/units in 2022: (e.g. production or fuel use): 20885 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
F2	FUGITIVE (NO STACK)		1	72		Area = 1	Insignificant Fugitive Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**50%**	**March-May 2022**	**14%**	**June-Aug. 2022**	**20%**	**Sept.-Nov. 2022**	**16%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**	0.05	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID Group G-84 consisting of ES-T-001, ES-T-002

2. Emission Source Description : Fuel Oil Storage Tanks

3. Operating Scenario ID/ Description: OS - 29/T-002 500,000 gal. Fuel Oil Storage Tank

4. SCC Number/Description: 39090003/Fuel Storage - Fixed Roof Tanks ; Distillate Oil (No. 2): Breathing Loss

5. Throughput/units in 2022: (e.g. production or fuel use): 20885 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
F2	FUGITIVE (NO STACK)		1	72		Area = 1	Insignificant Fugitive Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**	0.06	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-001-Boiler #6

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 4/[NSPS] One coal-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10200218/Bituminous Coal ; Atmospheric Fluidized Bed Combustion: Circulating Bed (Bitum. Coal)

5. Throughput/units in 2022: (e.g. production or fuel use): 19297 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur	2.03	%Ash	10.6	Heat Content (Btu/units)	12507 Btu/lb

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-11	CD-004.1	Calcium carbonate injection system
2	CS-11	CD-005.3	Dry Sorbent Injection System
3	CS-11	CD-004.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 4

Emission Source/Group ID: ES-001-Boiler #6

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**34%**	**March-May 2022**	**30%**	**June-Aug. 2022**	**23%**	**Sept.-Nov. 2022**	**13%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	54008.4	08	0		
Methane (CH4)	**74-82-8**	5.85	08	0		
Nitrous Oxide (N2O)	**10024972**	0.85	08	0		

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	5.55	04	0		
NOx	**NOx**	26.14	01	0		
TSP	**TSP**	5.87	04	99.8		
PM10	**PM10**	5.87	04	99.6		
PM2.5	**PM2.5**	5.87	04	97.9		
SO2	**SO2**	80.55	01	90		
VOC	**VOC**	0.11	04	0		

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	10.99929	09	0	0.00057	AFTER
Acetophenone	**98-86-2**	0.28946	09	0	0.000015	AFTER
Acrolein	**107-02-8**	5.59613	09	0	0.00029	AFTER
Antimony Unlisted Compounds (Specify & Component of SBC)	**SBC-Other**	0.15438	04	99.8	0.000008	AFTER
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.14666	04	99.8	0.0000076	AFTER
Benzene	**71-43-2**	25.0861	09	0	0.0013	AFTER
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00073	09	0	3.8E-8	AFTER
Benzyl chloride	**100-44-7**	13.5079	09	0	0.0007	AFTER

Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.02509	04	99.8	0.0000013	AFTER
Biphenyl (Component of POMTV)	**92-52-4**	0.0328	09	0	0.0000017	AFTER
Bromine	**7726-95-6**	3.9109	09	99.8	0.101336	BEFORE
Bromoform	**75-25-2**	0.75258	09	0	0.000039	AFTER
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.06773	04	99.8	0.00000351	AFTER
Carbon disulfide	**75-15-0**	2.50861	09	0	0.00013	AFTER
Chlorine	**7782-50-5**	51.51006	04	0	0.00266933	AFTER
Chloroacetophenone, 2-	**532-27-4**	0.13508	09	0	0.000007	AFTER
Chlorobenzene	**108-90-7**	0.42453	09	0	0.000022	AFTER
Chloroform	**67-66-3**	1.13852	09	0	0.000059	AFTER
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00467	09	99.8	0.000121	BEFORE
Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.1345	04	99.8	0.00000697	AFTER
Cumene	**98-82-8**	0.10227	09	0	0.0000053	AFTER
Cyanide Unlisted Compounds (Specify & Component of CNC)	**CNC-Other**	48.2425	09	0	0.0025	AFTER
Di(2-ethylhexyl)phthalate (DEHP)	**117-81-7**	1.40868	09	0	0.000073	AFTER
Dimethyl sulfate	**77-78-1**	0.92626	09	0	0.000048	AFTER
Dinitrotoluene, 2,4-	**121-14-2**	0.0054	09	0	2.8E-7	AFTER
Ethyl benzene	**100-41-4**	1.81392	09	0	0.000094	AFTER
Ethyl chloride (chloroethane)	**75-00-3**	0.81047	09	0	0.000042	AFTER
Ethylene dibromide	**106-93-4**	0.02316	09	0	0.0000012	AFTER
Ethylene dichloride (1,2-dichloroethane)	**107-06-2**	0.77188	09	0	0.00004	AFTER
Fluorides (sum of all fluoride compounds)	**16984-48-8**	109.69766	08	0	0.0056847	AFTER
Formaldehyde	**50-00-0**	31.3831	04	0	0.00162632	AFTER
Furans - Dibenzofurans (group total - CAA - unchlorinated) (Component of POMTV)	**132-64-9**	0.00388	09	0	2.01E-7	AFTER
Hexane, n-	**110-54-3**	1.2929	09	0	0.000067	AFTER
Hydrogen chloride (hydrochloric acid)	**7647-01-0**	5261.46471	04	0	0.272657133824482	AFTER
Hydrogen fluoride (hydrofluoric acid as mass of HF- Component of Fluorides)	**7664-39-3**	109.69766	04	0	0.0056847	AFTER
Isophorone	**78-59-1**	11.19226	09	0	0.00058	AFTER
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.85872	04	99.8	0.0000445	AFTER
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	5.7233	04	99.8	0.00029659	AFTER

Mercury, vapor (Component of HGC)	**7439-97-6**	0.03165	04	99.8	0.00000164	AFTER
Methyl bromide	**74-83-9**	3.08752	09	0	0.00016	AFTER
Methyl chloride	**74-87-3**	10.22741	09	0	0.00053	AFTER
Methyl chloroform	**71-55-6**	0.38594	08	0	0.00002	AFTER
Methyl ethyl ketone	**78-93-3**	7.52583	09	0	0.00039	AFTER
Methyl hydrazine	**60-34-4**	3.28049	09	0	0.00017	AFTER
Methyl methacrylate	**80-62-6**	0.38594	09	0	0.00002	AFTER
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	0.6754	09	0	0.000035	AFTER
Methylene chloride	**75-09-2**	5.59613	09	0	0.00029	AFTER
Naphthalene (Component of POMTV)	**91-20-3**	0.25086	09	0	0.000013	AFTER
Nickel metal (Component of NIC)	**7440-02-0**	4.65976	04	99.8	0.000241476	AFTER
Perchloroethylene (tetrachloroethylene)	**127-18-4**	0.82977	09	0	0.000043	AFTER
Phenol	**108-95-2**	0.30875	09	0	0.000016	AFTER
Phosphorus Metal, Yellow or White	**7723-14-0**	0.71187	04	0	0.00003689	AFTER
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	1.06836	09	0	0.0000553639	AFTER
Propionaldehyde	**123-38-6**	7.33286	09	0	0.00038	AFTER
Selenium Compounds	**SEC**	0.10478	04	0	0.00000543	AFTER
Styrene	**100-42-5**	0.48243	09	0	0.000025	AFTER
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (Component of CLDC & POMTV)	**1746-01-6**	0	09	0	1.43E-11	AFTER
Toluene	**108-88-3**	4.63128	09	0	0.00024	AFTER
Vinyl acetate	**108-05-4**	0.14666	09	0	0.0000076	AFTER
Xylene	**1330-20-7**	0.71399	09	0	0.000037	AFTER

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Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-001-Boiler #6

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 5/[NSPS] One natural gas-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10200602/Natural Gas ; 10-100 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 477482 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	1030 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-11	CD-004.1	Calcium carbonate injection system
2	CS-11	CD-005.3	Dry Sorbent Injection System
3	CS-11	CD-004.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 5

Emission Source/Group ID: ES-001-Boiler #6

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**33%**	**March-May 2022**	**20%**	**June-Aug. 2022**	**18%**	**Sept.-Nov. 2022**	**29%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	31300.7	09	0		
Methane (CH4)	**74-82-8**	0.5421	09	0		
Nitrous Oxide (N2O)	**10024972**	0.0542	09	0		

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	20.05	09	0		
NOx	**NOx**	26.64	01	0		
TSP	**TSP**	1.81	09	99.8		
PM10	**PM10**	1.81	09	99.6		
PM2.5	**PM2.5**	1.81	09	97.9		
SO2	**SO2**		08	0		
VOC	**VOC**	1.31	09	0		

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Ammonia (as NH3)	**7664-41-7**	1527.9424	09	99.8	0.0032	AFTER
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.0955	09	0		
Benzene	**71-43-2**	1.00271	09	0		
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00563	09	99.8	1.18E-8	AFTER
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.52523	09	0		
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.66847	09	0		

Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.03934	09	99.8	8.24E-8	AFTER
Dichlorobenzene(p), 1,4-	**106-46-7**	0.57298	09	0		
Formaldehyde	**50-00-0**	35.81115	09	0		
Hexane, n-	**110-54-3**	859.4676	09	0		
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.23874	09	0		
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.18144	09	0		
Mercury, vapor (Component of HGC)	**7439-97-6**	0.12415	09	0		
Naphthalene (Component of POMTV)	**91-20-3**	0.29126	09	0		
Nickel metal (Component of NIC)	**7440-02-0**	1.00271	09	0		
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.316	09	0		
Selenium Compounds	**SEC**	0.01122	09	0	2.35E-8	AFTER
Toluene	**108-88-3**	1.62344	09	0		

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Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-001-Boiler #6

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 30/[NSPS] One No. 2 fuel oil-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity.

4. SCC Number/Description: 10300501/Distillate Oil (No. 1 & 2) ; Normal Firing

5. Throughput/units in 2022: (e.g. production or fuel use):

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-11	CD-004.1	Calcium carbonate injection system
2	CS-11	CD-005.3	Dry Sorbent Injection System
3	CS-11	CD-004.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 30

Emission Source/Group ID: ES-001-Boiler #6

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)

Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :

Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-001-Boiler #6

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 110/OS-110[NSPS] One wood pellet-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10200907/Wood ; Wood Cogeneration

5. Throughput/units in 2022: (e.g. production or fuel use):

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-11	CD-004.1	Calcium carbonate injection system
2	CS-11	CD-005.3	Dry Sorbent Injection System
3	CS-11	CD-004.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 110

Emission Source/Group ID: ES-001-Boiler #6

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)

Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :

Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-002-Boiler #7

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 7/[NSPS] One coal-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10200218/Bituminous Coal ; Atmospheric Fluidized Bed Combustion: Circulating Bed (Bitum. Coal)

5. Throughput/units in 2022: (e.g. production or fuel use): 17448 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur	2	%Ash	10.65	Heat Content (Btu/units)	12396 Btu/lb

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-12	CD-005.1	Calcium carbonate injection system
2	CS-12	CD-005.3	Dry Sorbent Injection System
3	CS-12	CD-005.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 7

Emission Source/Group ID: ES-002-Boiler #7

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**30%**	**March-May 2022**	**27%**	**June-Aug. 2022**	**27%**	**Sept.-Nov. 2022**	**16%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	50534.1	09	0		
Methane (CH4)	**74-82-8**	5.245	09	0		
Nitrous Oxide (N2O)	**10024972**	0.7629	09	0		

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	5.13	04	0		
NOx	**NOx**	25.44	01	0		
TSP	**TSP**	4.83	04	99.8		
PM10	**PM10**	4.83	04	99.6		
PM2.5	**PM2.5**	4.83	04	97.9		
SO2	**SO2**	79.48	01	90		
VOC	**VOC**	0.1	09	0		

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	9.94536	09	0	0.00057	AFTER
Acetophenone	**98-86-2**	0.26172	09	0	0.000015	AFTER
Acrolein	**107-02-8**	5.05992	09	0	0.00029	AFTER
Antimony Unlisted Compounds (Specify & Component of SBC)	**SBC-Other**	0.14115	04	0	0.00000809	AFTER
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.13156	04	99.8	0.00000754	AFTER
Benzene	**71-43-2**	22.6824	09	0	0.0013	AFTER
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00066	09	0	3.8E-8	AFTER
Benzyl chloride	**100-44-7**	12.2136	09	0	0.0007	AFTER

Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.02303	04	99.8	0.00000132	AFTER
Biphenyl (Component of POMTV)	**92-52-4**	0.02966	09	0	0.0000017	AFTER
Bromine	**7726-95-6**	3.53458	09	99.8	0.1012904	BEFORE
Bromoform	**75-25-2**	0.68047	09	0	0.000039	AFTER
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.06072	04	99.8	0.00000348	AFTER
Carbon disulfide	**75-15-0**	2.26824	09	0	0.00013	AFTER
Chlorine	**7782-50-5**	46.55367	04	0	0.002668138	AFTER
Chloroacetophenone, 2-	**532-27-4**	0.12214	09	0	0.000007	AFTER
Chlorobenzene	**108-90-7**	0.38386	09	0	0.000022	AFTER
Chloroform	**67-66-3**	1.02943	09	0	0.000059	AFTER
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00419	04	99.8	0.00012019	BEFORE
Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.12057	04	0	0.00000691	AFTER
Cumene	**98-82-8**	0.09247	09	0	0.0000053	AFTER
Cyanide Unlisted Compounds (Specify & Component of CNC)	**CNC-Other**	43.62	09	0	0.0025	AFTER
Di(2-ethylhexyl)phthalate (DEHP)	**117-81-7**	1.2737	09	0	0.000073	AFTER
Dimethyl sulfate	**77-78-1**	0.8375	09	0	0.000048	AFTER
Dinitrotoluene, 2,4-	**121-14-2**	0.00489	09	0	2.8E-7	AFTER
Ethyl benzene	**100-41-4**	1.64011	09	0	0.000094	AFTER
Ethyl chloride (chloroethane)	**75-00-3**	0.73282	09	0	0.000042	AFTER
Ethylene dibromide	**106-93-4**	0.02094	09	0	0.0000012	AFTER
Ethylene dichloride (1,2-dichloroethane)	**107-06-2**	0.69792	09	0	0.00004	AFTER
Fluorides (sum of all fluoride compounds)	**16984-48-8**	100.48652	08	0	0.0057592	AFTER
Formaldehyde	**50-00-0**	28.36326	04	0	0.001625588	AFTER
Furans - Dibenzofurans (group total - CAA - unchlorinated) (Component of POMTV)	**132-64-9**	0.00351	09	0	2.01E-7	AFTER
Hexane, n-	**110-54-3**	1.16902	09	0	0.000067	AFTER
Hydrogen chloride (hydrochloric acid)	**7647-01-0**	6488.46816	04	0	0.371874608229814	AFTER
Hydrogen fluoride (hydrofluoric acid as mass of HF- Component of Fluorides)	**7664-39-3**	99.14128	04	0	0.0056821	AFTER
Isophorone	**78-59-1**	10.11984	09	0	0.00058	AFTER
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.76893	04	99.8	0.00004407	AFTER

Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	5.17263	04	99.8	0.00029646	AFTER
Mercury, vapor (Component of HGC)	**7439-97-6**	0.03357	04	0	0.00000192383130657557	AFTER
Methyl bromide	**74-83-9**	2.79168	09	0	0.00016	AFTER
Methyl chloride	**74-87-3**	9.24744	09	0	0.00053	AFTER
Methyl chloroform	**71-55-6**	0.34896	09	0	0.00002	AFTER
Methyl ethyl ketone	**78-93-3**	6.80472	09	0	0.00039	AFTER
Methyl hydrazine	**60-34-4**	2.96616	09	0	0.00017	AFTER
Methyl methacrylate	**80-62-6**	0.34896	09	0	0.00002	AFTER
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	0.61068	09	0	0.000035	AFTER
Methylene chloride	**75-09-2**	5.05992	09	0	0.00029	AFTER
Naphthalene (Component of POMTV)	**91-20-3**	0.22682	09	0	0.000013	AFTER
Nickel metal (Component of NIC)	**7440-02-0**	4.21195	04	99.8	0.0002414	AFTER
Perchloroethylene (tetrachloroethylene)	**127-18-4**	0.75026	09	0	0.000043	AFTER
Phenol	**108-95-2**	0.27917	09	0	0.000016	AFTER
Phosphorus Metal, Yellow or White	**7723-14-0**	0.6379	04	0	0.00003656	AFTER
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.96555	09	0	0.000055339	AFTER
Propionaldehyde	**123-38-6**	6.63024	09	0	0.00038	AFTER
Selenium Compounds	**SEC**	0.09387	04	0	0.00000538	AFTER
Styrene	**100-42-5**	0.4362	09	0	0.000025	AFTER
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (Component of CLDC & POMTV)	**1746-01-6**	0	08	0	1.43E-11	AFTER
Toluene	**108-88-3**	4.18752	09	0	0.00024	AFTER
Vinyl acetate	**108-05-4**	0.1326	09	0	0.0000076	AFTER
Xylene	**1330-20-7**	0.64558	09	0	0.000037	AFTER

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Facility ID : 6800043
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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-002-Boiler #7

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 8/[NSPS] One natural gas-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10200601/Natural Gas ; > 100 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 474107 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	1030 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-12	CD-005.1	Calcium carbonate injection system
2	CS-12	CD-005.3	Dry Sorbent Injection System
3	CS-12	CD-005.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 8

Emission Source/Group ID: ES-002-Boiler #7

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**33%**	**March-May 2022**	**17%**	**June-Aug. 2022**	**23%**	**Sept.-Nov. 2022**	**27%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	32450.8	08	0		
Methane (CH4)	**74-82-8**	0.5383	08	0		
Nitrous Oxide (N2O)	**10024972**	0.0538	08	0		

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	19.91	09	0		
NOx	**NOx**	28.72	01	0		
TSP	**TSP**	1.8	09	99.8		
PM10	**PM10**	1.8	09	99.6		
PM2.5	**PM2.5**	1.8	09	97.9		
SO2	**SO2**		08	0		
VOC	**VOC**	1.3	09	0		

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Ammonia (as NH3)	**7664-41-7**	1517.1424	09	0	0.0032	AFTER
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.09482	09	0		AFTER
Benzene	**71-43-2**	0.99562	09	0		AFTER
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00559	09	0	1.18E-8	AFTER
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.52152	09	0		AFTER
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.66375	09	0		AFTER

Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.03907	09	0	8.24E-8	AFTER
Dichlorobenzene(p), 1,4-	**106-46-7**	0.56893	09	0		AFTER
Formaldehyde	**50-00-0**	35.55803	09	0		AFTER
Hexane, n-	**110-54-3**	853.3926	09	0		AFTER
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.23705	09	0		AFTER
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.18016	09	0		AFTER
Mercury, vapor (Component of HGC)	**7439-97-6**	0.12327	09	0		AFTER
Naphthalene (Component of POMTV)	**91-20-3**	0.28921	09	0		AFTER
Nickel metal (Component of NIC)	**7440-02-0**	0.99562	09	0		AFTER
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.31376	09	0		AFTER
Selenium Compounds	**SEC**	0.01114	09	0	2.35E-8	AFTER
Toluene	**108-88-3**	1.61196	09	0		AFTER

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1. Emission Source ID (from permit) or Emission Source Group ID ES-002-Boiler #7

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 31/[NSPS] One No. 2 fuel oil-fired, circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10300501/Distillate Oil (No. 1 & 2) ; Normal Firing

5. Throughput/units in 2022: (e.g. production or fuel use):

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-12	CD-005.1	Calcium carbonate injection system
2	CS-12	CD-005.3	Dry Sorbent Injection System
3	CS-12	CD-005.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 31

Emission Source/Group ID: ES-002-Boiler #7

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)

Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :

Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-002-Boiler #7

2. Emission Source Description : One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI)-fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 111/OS-111/[NSPS] One wood-pellet-fired circulating fluidized combustion boiler, 323.17 million Btu heat input capacity

4. SCC Number/Description: 10300903/Wood ; Wood-fired Boiler

5. Throughput/units in 2022: (e.g. production or fuel use):

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-12	CD-005.1	Calcium carbonate injection system
2	CS-12	CD-005.3	Dry Sorbent Injection System
3	CS-12	CD-005.2	One bagfilter with 36,614 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
14-136	VERTICAL STACK	220	9	305	56.1	214135.66	Boiler Stack

Operating Scenario: OS - 111

Emission Source/Group ID: ES-002-Boiler #7

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)

Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :

Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-003-Boiler #8

2. Emission Source Description : One natural gas/No. 2 fuel oil-fired boiler, 338 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 10/[NSPS/PSD] One natural gas-fired boiler, 338 million Btu per hour heat input capacity

4. SCC Number/Description: 10200601/Natural Gas ; > 100 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 67571 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	1030 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-4	VERTICAL STACK	208	6	300	47.2	80072.91	Boiler Stack

Operating Scenario: OS - 10

Emission Source/Group ID: ES-003-Boiler #8

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**39%**	**March-May 2022**	**39%**	**June-Aug. 2022**	**2%**	**Sept.-Nov. 2022**	**20%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	876.81	01			
Methane (CH4)	**74-82-8**	0.0767	09			
Nitrous Oxide (N2O)	**10024972**	0.0077	09			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	2.84	09			
NOx	**NOx**	1.9	01			
TSP	**TSP**	0.26	09			
PM10	**PM10**	0.26	09			
PM2.5	**PM2.5**	0.26	09			
SO2	**SO2**	0.02	09			
VOC	**VOC**	0.19	09			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Ammonia (as NH3)	**7664-41-7**	216.2272	09		0.0032	
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.01351	09		2E-7	
Benzene	**71-43-2**	0.1419	09		0.0000021	
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00008	09		1.2E-9	
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00081	09		1.2E-8	
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.07433	09		0.0000011	

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.0946	09		0.0000014	
Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.00568	09		8.4E-8	
Dichlorobenzene(p), 1,4-	**106-46-7**	0.08109	09		0.0000012	
Formaldehyde	**50-00-0**	5.06782	09		0.000075	
Hexane, n-	**110-54-3**	121.6278	09		0.0018	
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.03379	09		5E-7	
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.02568	09		3.8E-7	
Mercury, vapor (Component of HGC)	**7439-97-6**	0.01757	09		2.6E-7	
Naphthalene (Component of POMTV)	**91-20-3**	0.04122	09		6.1E-7	
Nickel metal (Component of NIC)	**7440-02-0**	0.1419	09		0.0000021	
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.04473	09		6.62E-7	
Selenium Compounds	**SEC**	0.00162	09		2.4E-8	
Toluene	**108-88-3**	0.22974	09		0.0000034	

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-003-Boiler #8

2. Emission Source Description : One natural gas/No. 2 fuel oil-fired boiler, 338 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 11/[NSPS/PSD] One No. 2 fuel oil-fired boiler, 338 million Btu per hour heat input capacity

4. SCC Number/Description: 10300501/Distillate Oil (No. 1 & 2) ; Normal Firing

5. Throughput/units in 2022: (e.g. production or fuel use): 19.1 E3GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0397	%Ash	0	Heat Content (Btu/units)	134030 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-4	VERTICAL STACK	208	6	300	47.2	80072.91	Boiler Stack

Operating Scenario: OS - 11

Emission Source/Group ID: ES-003-Boiler #8

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	44.96	01			
Methane (CH4)	**74-82-8**	0.0085	09		0.8864443071	
Nitrous Oxide (N2O)	**10024972**	0.0017	09		0.17728886142	

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0	09		0.2	
NOx	**NOx**	0.07	01			
TSP	**TSP**	0.03	09		3.3	
PM10	**PM10**	0.03	09		3.3	
PM2.5	**PM2.5**	0.03	09		3.3	
SO2	**SO2**	0.05	09		5	
VOC	**VOC**	0.23	09		24	

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.0107	09		0.00056	
Benzene	**71-43-2**	0.05253	09		0.00275	
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00802	09		0.00042	
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00802	09		0.00042	

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00802	09		0.00042	
Ethyl benzene	**100-41-4**	0.01561	09		0.000817289719626168	
Fluorides (sum of all fluoride compounds)	**16984-48-8**	0.71243	09		0.0373	
Formaldehyde	**50-00-0**	0.9168	09		0.048	
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.02407	09		0.00126	
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.01604	09		0.00084	
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00802	09		0.00042	
Methyl chloroform	**71-55-6**	0.00451	09		0.000236	
Naphthalene (Component of POMTV)	**91-20-3**	0.00636	09		0.000333	
Nickel metal (Component of NIC)	**7440-02-0**	0.00802	09		0.00042	
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.06303	09		0.0033	
Selenium Compounds	**SEC**	0.04011	09		0.0021	
Toluene	**108-88-3**	1.52175	09		0.0796728971962617	
Xylene	**1330-20-7**	0.02675	09		0.00140070093457944	

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-004-Boiler #9

2. Emission Source Description : One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 49/One No.2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity

4. SCC Number/Description: 10300501/Distillate Oil (No. 1 & 2) ; Normal Firing

5. Throughput/units in 2022: (e.g. production or fuel use): 63.63 E3GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.04295	%Ash	0	Heat Content (Btu/units)	133822 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
Manning	VERTICAL STACK	135	9	335	44.01	167987.71	Combined Boiler Stack

Operating Scenario: OS - 49

Emission Source/Group ID: ES-004-Boiler #9

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	888.44	01			
Methane (CH4)	**74-82-8**	0.0282	09		0.8864443071	
Nitrous Oxide (N2O)	**10024972**	0.0056	09		0.17728886142	

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.16	09		5	
NOx	**NOx**	0.18	01			
TSP	**TSP**	0.1	09		3.3	
PM10	**PM10**	0.1	09		3.3	
PM2.5	**PM2.5**	0.1	09		3.3	
SO2	**SO2**	0.2	09		6.1848	
VOC	**VOC**	0.01	09		0.2	

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.03563	09		0.00056	
Benzene	**71-43-2**	0.17498	09		0.00275	
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.02672	09		0.00042	
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.02672	09		0.00042	

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.02672	09		0.00042	
Ethyl benzene	**100-41-4**	0.052	09		0.000817289719626168	
Fluorides (sum of all fluoride compounds)	**16984-48-8**	2.3734	09		0.0373	
Formaldehyde	**50-00-0**	3.05424	09		0.048	
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.08017	09		0.00126	
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.05345	09		0.00084	
Mercury, vapor (Component of HGC)	**7439-97-6**	0.02672	09		0.00042	
Methyl chloroform	**71-55-6**	0.01502	09		0.000236	
Naphthalene (Component of POMTV)	**91-20-3**	0.02119	09		0.000333	
Nickel metal (Component of NIC)	**7440-02-0**	0.02672	08		0.00042	
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.20998	09		0.0033	
Selenium Compounds	**SEC**	0.13362	09		0.0021	
Toluene	**108-88-3**	5.06959	09		0.0796728971962617	
Xylene	**1330-20-7**	0.08913	09		0.00140070093457944	

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-004-Boiler #9

2. Emission Source Description : One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 78/One natural gas-fired boiler, 249 million Btu per hour heat capacity

4. SCC Number/Description: 10300601/Natural Gas ; > 100 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 178816 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	1030 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
Manning	VERTICAL STACK	135	9	335	44.01	167987.71	Combined Boiler Stack

Operating Scenario: OS - 78

Emission Source/Group ID: ES-004-Boiler #9

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**40%**	**March-May 2022**	**31%**	**June-Aug. 2022**	**1%**	**Sept.-Nov. 2022**	**28%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	13825.93	01			
Methane (CH4)	**74-82-8**	0.203	09			
Nitrous Oxide (N2O)	**10024972**	0.0203	09			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	7.51	09		0.084	
NOx	**NOx**	3.98	01			
TSP	**TSP**	0.68	09		0.0076	
PM10	**PM10**	0.68	09		0.0076	
PM2.5	**PM2.5**	0.68	09		0.0076	
SO2	**SO2**	0.05	09			
VOC	**VOC**	0.49	09		0.0055	
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Ammonia (as NH3)	**7664-41-7**	572.2112	09		0.0032	
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.03576	09		2E-7	
Benzene	**71-43-2**	0.37551	09		0.0000021	
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00211	09		1.18E-8	
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.1967	09		0.0000011	
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.25034	09		0.0000014	

Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.01473	09		8.24E-8	
Dichlorobenzene(p), 1,4-	**106-46-7**	0.21458	09		0.0000012	
Formaldehyde	**50-00-0**	13.4112	09		0.000075	
Hexane, n-	**110-54-3**	321.8688	09		0.0018	
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.08941	09		5E-7	
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.06795	09		3.8E-7	
Mercury, vapor (Component of HGC)	**7439-97-6**	0.04649	09		2.6E-7	
Naphthalene (Component of POMTV)	**91-20-3**	0.10908	09		6.1E-7	
Nickel metal (Component of NIC)	**7440-02-0**	0.37551	09		0.0000021	
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.11802	09		6.6E-7	
Selenium Compounds	**SEC**	0.0042	09		2.35E-8	
Toluene	**108-88-3**	0.60797	09		0.0000034	

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID: ES-005-Boiler #10

2. Emission Source Description : One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 50/One No.2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity

4. SCC Number/Description: 10300501/Distillate Oil (No. 1 & 2) ; Normal Firing

5. Throughput/units in 2022: (e.g. production or fuel use): 11.45 E3GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.04295	%Ash	0	Heat Content (Btu/units)	133822 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
Manning	VERTICAL STACK	135	9	335	44.01	167987.71	Combined Boiler Stack

Operating Scenario: OS - 50

Emission Source/Group ID: ES-005-Boiler #10

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	167.52	01			
Methane (CH4)	**74-82-8**	0.0051	09		0.886444307	
Nitrous Oxide (N2O)	**10024972**	0.001	09		0.177288861	

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	09		5	
NOx	**NOx**	0.04	01			
TSP	**TSP**	0.02	09		3.3	
PM10	**PM10**	0.02	09		3.3	
PM2.5	**PM2.5**	0.02	09		3.3	
SO2	**SO2**	0.04	09		6.1848	
VOC	**VOC**	0	09		0.2	

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00641	09		0.00056	
Benzene	**71-43-2**	0.03149	09		0.00275	
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00481	09		0.00042	
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00481	09		0.00042	

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00481	09		0.00042	
Ethyl benzene	**100-41-4**	0.00936	09		0.000817289719626168	
Fluorides (sum of all fluoride compounds)	**16984-48-8**	0.42708	09		0.0373	
Formaldehyde	**50-00-0**	0.5496	09		0.048	
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.01443	09		0.00126	
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00962	09		0.00084	
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00481	09		0.00042	
Methyl chloroform	**71-55-6**	0.0027	09		0.000236	
Naphthalene (Component of POMTV)	**91-20-3**	0.00381	09		0.000333	
Nickel metal (Component of NIC)	**7440-02-0**	0.00481	08		0.00042	
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.03778	09		0.0033	
Selenium Compounds	**SEC**	0.02404	09		0.0021	
Toluene	**108-88-3**	0.91225	09		0.0796728971962617	
Xylene	**1330-20-7**	0.01604	09		0.00140070093457944	

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-005-Boiler #10

2. Emission Source Description : One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity [NSPS Db, MACT DDDDD, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 77/One natural gas-fired boiler, 249 million Btu per hour heat input capacity

4. SCC Number/Description: 10300601/Natural Gas ; > 100 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 146191 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	1030 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
Manning	VERTICAL STACK	135	9	335	44.01	167987.71	Combined Boiler Stack

Operating Scenario: OS - 77

Emission Source/Group ID: ES-005-Boiler #10

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (50)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**19%**	**March-May 2022**	**50%**	**June-Aug. 2022**	**1%**	**Sept.-Nov. 2022**	**30%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	11848.12	01			
Methane (CH4)	**74-82-8**	0.166	09			
Nitrous Oxide (N2O)	**10024972**	0.0166	09			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	6.14	09		0.084	
NOx	**NOx**	3.7	01			
TSP	**TSP**	0.56	09		0.0076	
PM10	**PM10**	0.56	09		0.0076	
PM2.5	**PM2.5**	0.56	09		0.0076	
SO2	**SO2**	0.04	09		0.0006	
VOC	**VOC**	0.4	09		0.0055	

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Ammonia (as NH3)	**7664-41-7**	467.8112	09		0.0032	
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.02924	09		2E-7	
Benzene	**71-43-2**	0.307	09		0.0000021	
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00173	09		1.18E-8	
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.16081	09		0.0000011	
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.20467	09		0.0000014	

Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.01205	09		8.24E-8	
Dichlorobenzene(p), 1,4-	**106-46-7**	0.17543	09		0.0000012	
Formaldehyde	**50-00-0**	10.96432	09		0.000075	
Hexane, n-	**110-54-3**	263.1438	09		0.0018	
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.0731	09		5E-7	
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.05555	09		3.8E-7	
Mercury, vapor (Component of HGC)	**7439-97-6**	0.03801	09		2.6E-7	
Naphthalene (Component of POMTV)	**91-20-3**	0.08918	09		6.1E-7	
Nickel metal (Component of NIC)	**7440-02-0**	0.307	09		0.0000021	
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.09649	09		6.6E-7	
Selenium Compounds	**SEC**	0.00344	09		2.35E-8	
Toluene	**108-88-3**	0.49705	09		0.0000034	

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-010A

2. Emission Source Description : [NSPS] One coal crusher building

3. Operating Scenario ID/ Description: OS - 14/[NSPS] One coal crusher building

4. SCC Number/Description: 30501011/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Coal Transfer

5. Throughput/units in 2022: (e.g. production or fuel use): 36745 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-7	CD-013	One bagfilter with 1330 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
12-053	VERTICAL STACK	47	1.8	72	44	6717.98	Coal Crusher/Conveyor Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (6) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**32%**	**March-May 2022**	**28%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**15%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08	0		
NOx	**NOx**		08	0		
TSP	**TSP**	0.26	08	99.8		
PM10	**PM10**	0.26	08	99.6		
PM2.5	**PM2.5**	0.25	08	97.9		
SO2	**SO2**		08	0		
VOC	**VOC**		08	0		

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-030

2. Emission Source Description : One ash storage silo equipped with dry loadout system

3. Operating Scenario ID/ Description: OS - 15/One ash storage silo equipped with dry loadout system

4. SCC Number/Description: 30501011/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Coal Transfer

5. Throughput/units in 2022: (e.g. production or fuel use): 10395 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-8	CD-031	One bagfilter with 577 square feet of filter surface area

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
V1	DOWNWARD-FACING VENT	5	3	72	5	2121	Vent for baghouse

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (10) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08	0		
NOx	**NOx**		08	0		
TSP	**TSP**	0.84	08	99.8		
PM10	**PM10**	0.84	08	99.6		
PM2.5	**PM2.5**	0.8	08	97.9		
SO2	**SO2**		08	0		
VOC	**VOC**		08	0		

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-030A

2. Emission Source Description : Enclosed wet ash loadout system

3. Operating Scenario ID/ Description: OS - 16/Enclosed wet ash loadout system

4. SCC Number/Description: 30501011/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Coal Transfer

5. Throughput/units in 2022: (e.g. production or fuel use): 10395 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack): 100

8. Control Device Information :

Order	CS-ID	CD ID (as listed in permit)	Control Device Description
1	CS-9	CD-032	Water injection system (8.64 gallon per minute injection rate)

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-WALS	VERTICAL STACK	1	1	70	1	47.12	WET ASH LOADOUT SYSTEM

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08	0		
NOx	**NOx**		08	0		
TSP	**TSP**	0	08	99.5		
PM10	**PM10**		08	0		
PM2.5	**PM2.5**		08	0		
SO2	**SO2**		08	0		
VOC	**VOC**		08	0		
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#1

2. Emission Source Description : One diesel-fired emergency generator (900 kW), located at the EPA Building [MACT]

3. Operating Scenario ID/ Description: OS - 18/One diesel-fired emergency generator (900 kW), located at the EPA Building

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 197 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG1	VERTICAL STACK	3	2.26	817	30.7	7389.18	Emergency Generator #1

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	2.1669	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00067	08			
Acrolein	**107-02-8**	0.00021	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00011	08			
Benzene	**71-43-2**	0.02063	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00008	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00008	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00008	08			
Formaldehyde	**50-00-0**	0.0021	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00024	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00016	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00008	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00346	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00008	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00563	08			
Selenium Compounds	**SEC**	0.0004	08			
Toluene	**108-88-3**	0.00747	08			
Xylene	**1330-20-7**	0.00513	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#10

2. Emission Source Description : One diesel-fired emergency generator (800 kW) located at Bondurant Hall [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 41/One diesel-fired emergency generator (800 kW) located at Bondurant Hall

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 380 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#10	VERTICAL STACK	54	1	950	125.2	5899.91	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	4.1872	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.02	08			
NOx	**NOx**	0.05	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00129	08			
Acrolein	**107-02-8**	0.0004	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00021	08			
Benzene	**71-43-2**	0.03986	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00015	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00015	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00015	08			
Formaldehyde	**50-00-0**	0.00405	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00046	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00031	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00015	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00668	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00015	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01089	08			
Selenium Compounds	**SEC**	0.00077	08			
Toluene	**108-88-3**	0.01443	08			
Xylene	**1330-20-7**	0.00991	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#11

2. Emission Source Description : One diesel-fired emergency generator (1,750 kW) located at Burnett-Womack Building [MACT ZZZZ, PSD {40 CFR 51.116 (a) though (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 42/One diesel-fired emergency generator (1,750 kW) located at the Burnett-Womack Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 860 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#11	VERTICAL STACK	106	1.3	944	135.35	10779.18	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	9.4649	08			
Methane (CH4)	**74-82-8**	0.0004	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.05	08			
NOx	**NOx**	0.11	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00293	08			
Acrolein	**107-02-8**	0.00091	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00046	08			
Benzene	**71-43-2**	0.09009	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00003	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00035	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00035	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00035	08			
Formaldehyde	**50-00-0**	0.00916	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00104	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.0007	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00035	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01509	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00035	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02461	08			
Selenium Compounds	**SEC**	0.00174	08			
Toluene	**108-88-3**	0.03262	08			
Xylene	**1330-20-7**	0.02241	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#12

2. Emission Source Description : One diesel-fired emergency generator (1,250 kW) located at the Mary Ellen Jones Building [MACT ZZZZ, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 55/One diesel-fired emergency generator (1,250 kW) located at the Mary Ellen Jones Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 701 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#12	VERTICAL STACK	2	6.67	851	4.33	9077.8	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	7.7202	08			
Methane (CH4)	**74-82-8**	0.0003	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.04	08			
NOx	**NOx**	0.09	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00239	08			
Acrolein	**107-02-8**	0.00075	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00038	08			
Benzene	**71-43-2**	0.07348	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00028	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00028	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00028	08			
Formaldehyde	**50-00-0**	0.00747	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00085	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00057	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00028	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01231	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00028	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02008	08			
Selenium Compounds	**SEC**	0.00142	08			
Toluene	**108-88-3**	0.02661	08			
Xylene	**1330-20-7**	0.01828	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#13

2. Emission Source Description : One diesel-fired emergency generator (2,000 kW) located at the Genetic Medicine Building [MACT ZZZZ, NSPS IIII, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 56/One diesel-fired emergency generator (2,000 kW) located at the Genetic Medicine Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 951 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#13	VERTICAL STACK	65	1.5	847	145.91	15470.65	emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	10.4681	08			
Methane (CH4)	**74-82-8**	0.0004	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.05	08			
NOx	**NOx**	0.12	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0.01	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00324	08			
Acrolein	**107-02-8**	0.00101	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00051	08			
Benzene	**71-43-2**	0.09964	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00003	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00039	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00039	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00039	08			
Formaldehyde	**50-00-0**	0.01013	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00116	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00077	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00039	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01669	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00039	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02722	08			
Selenium Compounds	**SEC**	0.00193	08			
Toluene	**108-88-3**	0.03608	08			
Xylene	**1330-20-7**	0.02478	08			

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#14

2. Emission Source Description : One diesel-fired emergency generator (900 kW) located at the 440 West Franklin Building [MACT ZZZZ, PSD {40 CFR 51.166 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 57/One diesel-fired emergency generator (900 kW) located at the 440 W. Franklin Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 508 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#14	VERTICAL STACK	12	1	806	159.12	7498.35	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	5.59	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.07	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00173	08			
Acrolein	**107-02-8**	0.00054	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00027	08			
Benzene	**71-43-2**	0.05321	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00021	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00021	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00021	08			
Formaldehyde	**50-00-0**	0.00541	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00062	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00041	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00021	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00891	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00021	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01454	08			
Selenium Compounds	**SEC**	0.00103	08			
Toluene	**108-88-3**	0.01927	08			
Xylene	**1330-20-7**	0.01323	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#15

2. Emission Source Description : One diesel-fired emergency generator (2,000 kW) located at the Rams Head Center [MACT ZZZZ, PSD {40 CFR 51.666 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 71/One diesel-fired emergency generator (2,000 kW) located at the Rams Head Center

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 831 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#15	VERTICAL STACK	14	1.5	847	145.91	15470.65	emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	9.1421	08			
Methane (CH4)	**74-82-8**	0.0004	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.05	08			
NOx	**NOx**	0.11	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00283	08			
Acrolein	**107-02-8**	0.00088	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00045	08			
Benzene	**71-43-2**	0.08702	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00003	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00034	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00034	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00034	08			
Formaldehyde	**50-00-0**	0.00885	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00101	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00067	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00034	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01458	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00034	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02377	08			
Selenium Compounds	**SEC**	0.00168	08			
Toluene	**108-88-3**	0.03151	08			
Xylene	**1330-20-7**	0.02164	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#16

2. Emission Source Description : One diesel-fired emergency generator (2,000 kW) located at the ITS Building [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 72/One diesel-fired emergency generator (2,000 kW) located at the ITS Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 888 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#16	VERTICAL STACK	78	1.5	847	145.91	15470.65	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	9.7702	08			
Methane (CH4)	**74-82-8**	0.0004	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.05	08			
NOx	**NOx**	0.11	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00302	08			
Acrolein	**107-02-8**	0.00094	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00048	08			
Benzene	**71-43-2**	0.093	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00003	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00036	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00036	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00036	08			
Formaldehyde	**50-00-0**	0.00946	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00108	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00072	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00036	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01558	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00036	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02541	08			
Selenium Compounds	**SEC**	0.0018	08			
Toluene	**108-88-3**	0.03368	08			
Xylene	**1330-20-7**	0.02313	08			

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123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#17

2. Emission Source Description : One diesel-fired emergency generator (1,000 kW) located at the Brinkhous-Bullitt Building [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 98/One diesel-fired emergency generator (1000KW) located at the Brinkhous-Bullit Building.

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 371 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#17	VERTICAL STACK	10	1	835	173.2	8161.85	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	4.0826	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.02	08			
NOx	**NOx**	0.05	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00126	08			
Acrolein	**107-02-8**	0.00039	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.0002	08			
Benzene	**71-43-2**	0.03886	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00015	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00015	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00015	08			
Formaldehyde	**50-00-0**	0.00395	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00045	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.0003	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00015	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00651	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00015	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01062	08			
Selenium Compounds	**SEC**	0.00075	08			
Toluene	**108-88-3**	0.01407	08			
Xylene	**1330-20-7**	0.00966	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#18

2. Emission Source Description : One diesel-fired emergency generator (1,000 kW) located at Venable Hall [MACT ZZZZ, NSPS III]

3. Operating Scenario ID/ Description: OS - 104/1,000 kW Diesel-fired Emergency Generator at Venable Hall

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 441 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#18	VERTICAL STACK	45	1	835	173.2	8161.85	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	4.8502	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.06	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.0015	08			
Acrolein	**107-02-8**	0.00047	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00024	08			
Benzene	**71-43-2**	0.04617	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00018	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00018	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00018	08			
Formaldehyde	**50-00-0**	0.00469	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00054	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00036	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00018	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00773	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00018	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01261	08			
Selenium Compounds	**SEC**	0.00089	08			
Toluene	**108-88-3**	0.01672	08			
Xylene	**1330-20-7**	0.01148	08			

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DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#19

2. Emission Source Description : One diesel-fired emergency generator (2,500 kW) located at the Imaging Research Building [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 105/one diesel-fired emergency generator (2,500 kW) located at Imaging Research

4. SCC Number/Description: 20200401/Diesel ; Diesel

5. Throughput/units in 2022: (e.g. production or fuel use): 1070 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#19	VERTICAL STACK	75	1.8	921	120.25	18359.93	Emergency Generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	11.7766	08			
Methane (CH4)	**74-82-8**	0.0005	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.06	08			
NOx	**NOx**	0.14	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0.01	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00364	08			
Acrolein	**107-02-8**	0.00114	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00058	08			
Benzene	**71-43-2**	0.11209	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00004	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00043	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00043	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00043	08			
Formaldehyde	**50-00-0**	0.0114	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.0013	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00087	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00043	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01878	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00043	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.03062	08			
Selenium Compounds	**SEC**	0.00217	08			
Toluene	**108-88-3**	0.04059	08			
Xylene	**1330-20-7**	0.02788	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#2

2. Emission Source Description : One diesel-fired emergency generator (1,600 kW), located at the Thurston Bowles Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 19/One diesel-fired emergency generator (1600 kW), located at the Thurston Bowles Building

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 659 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG2	VERTICAL STACK	95	1.167	900	199	12771.32	Emergency Generator #2

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	7.2579	08			
Methane (CH4)	**74-82-8**	0.0003	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.04	08			
NOx	**NOx**	0.08	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00224	08			
Acrolein	**107-02-8**	0.0007	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00036	08			
Benzene	**71-43-2**	0.06908	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00027	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00027	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00027	08			
Formaldehyde	**50-00-0**	0.00702	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.0008	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00053	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00027	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01157	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00027	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01887	08			
Selenium Compounds	**SEC**	0.00134	08			
Toluene	**108-88-3**	0.02502	08			
Xylene	**1330-20-7**	0.01718	08			

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123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#20

2. Emission Source Description : One diesel-fired emergency generator (2,000 kW) located at the Genomic Science Building [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 106/One diesel-fire emergency generator (2,000 kW) located at the Genomic Science Building

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 824 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#20	VERTICAL STACK	20	1.5	762	142.75	15135.6	emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	9.0723	08			
Methane (CH4)	**74-82-8**	0.0004	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.05	08			
NOx	**NOx**	0.11	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.0028	08			
Acrolein	**107-02-8**	0.00088	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00045	08			
Benzene	**71-43-2**	0.08635	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00003	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00033	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00033	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00033	08			
Formaldehyde	**50-00-0**	0.00878	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.001	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00067	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00033	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01447	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00033	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02359	08			
Selenium Compounds	**SEC**	0.00167	08			
Toluene	**108-88-3**	0.03127	08			
Xylene	**1330-20-7**	0.02148	08			

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123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#21

2. Emission Source Description : One diesel-fired emergency generator (1,250 kW) located at the Dental Research Building. [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 113/1,350 kW Emergency Generator at the Dental Research Building

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 535 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#21	VERTICAL STACK	127	1.25	950	155.61	11458	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	5.8883	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.07	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00182	08			
Acrolein	**107-02-8**	0.00057	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00029	08			
Benzene	**71-43-2**	0.05605	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00022	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00022	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00022	08			
Formaldehyde	**50-00-0**	0.0057	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00065	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00043	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00022	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00939	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00022	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01531	08			
Selenium Compounds	**SEC**	0.00108	08			
Toluene	**108-88-3**	0.0203	08			
Xylene	**1330-20-7**	0.01394	08			

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123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#3

2. Emission Source Description : One diesel-fired emergency generator (728 kW), located at the Lineberger Cancer Research Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 20/One diesel-fired emergency generator (728 kW), located at the Lineberger Cancer Research Building

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: 321 GAL/yr
(e.g. production or fuel use):

6. Fuel Information
(If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency
(% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG3	VERTICAL STACK	45	1	825	116	5466.37	Emergency Generator #3

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	3.531	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.02	08			
NOx	**NOx**	0.04	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00109	08			
Acrolein	**107-02-8**	0.00034	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00017	08			
Benzene	**71-43-2**	0.03361	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00013	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00013	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00013	08			
Formaldehyde	**50-00-0**	0.00342	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00039	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00026	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00013	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00563	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00013	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00918	08			
Selenium Compounds	**SEC**	0.00065	08			
Toluene	**108-88-3**	0.01217	08			
Xylene	**1330-20-7**	0.00836	08			

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#4

2. Emission Source Description : One diesel-fired emergency generator (1,000 kW) located at Taylor Hall [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 21/One diesel-fired emergency generator (1000 kW) located at Taylor Hall

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 476 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG4	VERTICAL STACK	79	1	806	159	7492.69	Emergency Generator #4

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	5.234	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.06	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00162	08			
Acrolein	**107-02-8**	0.00162	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00026	08			
Benzene	**71-43-2**	0.04982	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00019	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00019	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00019	08			
Formaldehyde	**50-00-0**	0.00507	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00058	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00039	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00019	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00835	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00019	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01361	08			
Selenium Compounds	**SEC**	0.00096	08			
Toluene	**108-88-3**	0.01804	08			
Xylene	**1330-20-7**	0.01239	08			

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Facility ID : 6800043
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County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#5

2. Emission Source Description : One diesel-fired emergency generator (910 kW) located at the Neuroscience Research Building [MACT]

3. Operating Scenario ID/ Description: OS - 22/One diesel-fired emergency generator (910 kW) located at the Neuroscience Research Building

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 433 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG5	VERTICAL STACK	130	1	847	162.9	7676.48	Emergency Generator #5

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	4.763	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.02	08			
NOx	**NOx**	0.06	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00147	08			
Acrolein	**107-02-8**	0.00046	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00023	08			
Benzene	**71-43-2**	0.04534	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00018	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00018	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00018	08			
Formaldehyde	**50-00-0**	0.00461	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00053	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00035	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00018	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00759	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00018	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01239	08			
Selenium Compounds	**SEC**	0.00088	08			
Toluene	**108-88-3**	0.01642	08			
Xylene	**1330-20-7**	0.01128	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#6

2. Emission Source Description : One diesel-fired emergency generator (1,500 kW) located at the Medical Biomolecular Research Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 23/One diesel-fired emergency generator (1500 kW) located at the Medical Biomolecular Research Building

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 713 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG6	VERTICAL STACK	55	1	944	258.5	12181.52	Emergency Generator #6

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	7.8511	08			
Methane (CH4)	**74-82-8**	0.0003	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.04	08			
NOx	**NOx**	0.09	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00243	08			
Acrolein	**107-02-8**	0.00076	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00039	08			
Benzene	**71-43-2**	0.07473	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00029	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00029	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00029	08			
Formaldehyde	**50-00-0**	0.0076	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00087	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00058	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00029	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01252	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00029	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02042	08			
Selenium Compounds	**SEC**	0.00144	08			
Toluene	**108-88-3**	0.02706	08			
Xylene	**1330-20-7**	0.01859	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#7

2. Emission Source Description : One diesel-fired emergency generator (1,250 kW) located at the Michael Hooker Research Center [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 43/One diesel-fired emergency generator (1250 kW) located at the Michael Hooker Research Center

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 531 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG7	VERTICAL STACK	57	1	650	210	9896.01	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	5.8447	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.07	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00181	08			
Acrolein	**107-02-8**	0.00056	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00029	08			
Benzene	**71-43-2**	0.05563	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00002	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00022	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00022	08			

Formaldehyde	**50-00-0**	0.00566	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00065	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00043	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00022	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00932	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00022	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.0152	08			
Selenium Compounds	**SEC**	0.00108	08			
Toluene	**108-88-3**	0.02015	08			
Xylene	**1330-20-7**	0.01384	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#8

2. Emission Source Description : One diesel-fired emergency generator (800 kW) located at Chapman Hall [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 44/One diesel-fired emergency generator (800 kW) located at Chapman Hall

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 431 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#8	VERTICAL STACK	41	1.3	944	165.35	13168.37	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	4.7455	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.02	08			
NOx	**NOx**	0.06	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00147	08			
Acrolein	**107-02-8**	0.00046	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00023	08			
Benzene	**71-43-2**	0.04517	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00017	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00017	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00017	08			
Formaldehyde	**50-00-0**	0.00459	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00052	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00035	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00017	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00757	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00017	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01234	08			
Selenium Compounds	**SEC**	0.00087	08			
Toluene	**108-88-3**	0.01636	08			
Xylene	**1330-20-7**	0.01123	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-EG#9

2. Emission Source Description : One diesel-fired emergency generator (1,000 kW) located at the Caudill Labs [MACT ZZZZ, PSD {40 CFR 51.1666 (a) through (i) and (s)}]

3. Operating Scenario ID/ Description: OS - 45/One diesel-fired emergency generator (1,000 kW) located at the Caudill Labs

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 412 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG#9	VERTICAL STACK	57	1.3	944	165.35	13168.37	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	4.5362	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.02	08			
NOx	**NOx**	0.05	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.0014	08			
Acrolein	**107-02-8**	0.00044	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00022	08			
Benzene	**71-43-2**	0.04318	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00017	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00017	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00017	08			
Formaldehyde	**50-00-0**	0.00439	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.0005	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00033	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00017	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00723	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00017	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.0118	08			
Selenium Compounds	**SEC**	0.00083	08			
Toluene	**108-88-3**	0.01564	08			
Xylene	**1330-20-7**	0.01074	08			

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-FP-1

2. Emission Source Description : Fire water pump (77 hp, diesel-fired), located at Kenan Stadium [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 107/77 Hp Fire Pump at Kenan Stadium

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 28.4 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-FP1	VERTICAL STACK	10	0.5	1075	40.31	475	Diesel Fire Pump Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	0.3126	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0	08			
NOx	**NOx**	0.01	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00294	08			
Acrolein	**107-02-8**	0.00035	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00002	08			
Benzene	**71-43-2**	0.00358	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00001	08			
Butadiene, 1,3-	**106-99-0**	0.00015	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00001	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00001	08			
Formaldehyde	**50-00-0**	0.00452	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00003	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00002	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00001	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00033	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00001	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00064	08			
Selenium Compounds	**SEC**	0.00006	08			
Toluene	**108-88-3**	0.00157	08			
Xylene	**1330-20-7**	0.00109	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-FP-2

2. Emission Source Description : Fire water pump (110 hp, diesel-fired), located at McColl Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 114/110 Hp Diesel Fire Pump at the McColl Building

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 49.4 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-FP2	VERTICAL STACK	1	0.5	950	57.63	679	Diesel Fire Pump Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	0.5438	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0	08			
NOx	**NOx**	0.01	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.00512	08			
Acrolein	**107-02-8**	0.00062	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00003	08			
Benzene	**71-43-2**	0.00622	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00002	08			
Butadiene, 1,3-	**106-99-0**	0.00026	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00002	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00002	08			
Formaldehyde	**50-00-0**	0.00787	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00006	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00004	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00002	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00057	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00002	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00112	08			
Selenium Compounds	**SEC**	0.0001	08			
Toluene	**108-88-3**	0.00273	08			
Xylene	**1330-20-7**	0.0019	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-FP-3

2. Emission Source Description : Fire water pump (123 hp, diesel-fired), located at Davis Library [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 115/123 Hp Diesel Fire Pump at the Davis Library

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 34.3 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-FP3	VERTICAL STACK	45	1	950	14.4	679	Diesel Fire Pump Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	0.3777	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0	08			
NOx	**NOx**	0.01	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00355	08			
Acrolein	**107-02-8**	0.00043	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00002	08			
Benzene	**71-43-2**	0.00432	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00001	08			
Butadiene, 1,3-	**106-99-0**	0.00018	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00001	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00001	08			
Formaldehyde	**50-00-0**	0.00547	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00004	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00003	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00039	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00001	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00078	08			
Selenium Compounds	**SEC**	0.00007	08			
Toluene	**108-88-3**	0.00189	08			
Xylene	**1330-20-7**	0.00132	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-13

2. Emission Source Description : Emergency generator (300 kW, diesel-fired), located at the Davie Hall [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 122/300 kW diesel-fired emergency generator at Davie Hall

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 142 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-Gen13	VERTICAL STACK	56.56	0.667	927	117.38	2461	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	1.5597	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.04	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.01467	08			
Acrolein	**107-02-8**	0.00177	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00008	08			
Benzene	**71-43-2**	0.01785	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00006	08			
Butadiene, 1,3-	**106-99-0**	0.00075	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00006	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00006	08			
Formaldehyde	**50-00-0**	0.02258	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00017	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00011	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00006	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00162	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00006	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00321	08			
Selenium Compounds	**SEC**	0.00029	08			
Toluene	**108-88-3**	0.00782	08			
Xylene	**1330-20-7**	0.00545	08			

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-2

2. Emission Source Description : Emergency generator (500 kW, diesel-fired), located at Ambulatory Care Center [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 108/OS-108/[NSPS] One diesel-fired emergency generator (450 kW) located at the Ambulatory Care Center

4. SCC Number/Description: 20200102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: 476 GAL/yr
(e.g. production or fuel use):

6. Fuel Information
(If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency
(% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-EG02	VERTICAL STACK	5	0.83	918	120.75	3919.98	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	5.234	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.06	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00162	08			
Acrolein	**107-02-8**	0.00051	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00026	08			
Benzene	**71-43-2**	0.04982	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00019	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00019	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00019	08			
Formaldehyde	**50-00-0**	0.00507	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00058	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00039	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00019	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00835	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00019	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.01361	08			
Selenium Compounds	**SEC**	0.00096	08			
Toluene	**108-88-3**	0.01804	08			
Xylene	**1330-20-7**	0.01239	08			

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Facility ID : 6800043
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County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-21

2. Emission Source Description : Emergency generator (40 kW, natural gas-fired), located at the Old Dental School Building

3. Operating Scenario ID/ Description: OS - 82/One 40 kW natural gas-fired emergency generator located at the Old Dental School Building

4. SCC Number/Description: 20300201/Natural Gas ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 636 KW-HR/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS21	VERTICAL STACK	6	0.25	850	152.79	450	emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	0.3969	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**	0.12	08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-30

2. Emission Source Description : Emergency generator (535 kW, diesel-fired) located at the Lineburger Building Addition [MACT]

3. Operating Scenario ID/ Description: OS - 84/One 535 kW diesel-fired emergency generator located at the Lineberger Building Addition

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 236 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS30	VERTICAL STACK	48	0.833	1139	125.81	4113.82	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	2.5949	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.0008	08			
Acrolein	**107-02-8**	0.00025	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00013	08			
Benzene	**71-43-2**	0.0247	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.0001	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.0001	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.0001	08			
Formaldehyde	**50-00-0**	0.00251	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00029	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00019	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.0001	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00414	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.0001	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00675	08			
Selenium Compounds	**SEC**	0.00048	08			
Toluene	**108-88-3**	0.00894	08			
Xylene	**1330-20-7**	0.00614	08			

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-36

2. Emission Source Description : Emergency generator (30 kW, natural gas-fired), located at the Morehead Planetarium [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 65/One natural gas-fired emergency generator (30 kW) located at the Morehead Planetarium

4. SCC Number/Description: 20300201/Natural Gas ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 444 KW-HR/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS36	VERTICAL STACK	10	0.33	1000	73	374.62	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	0.2771	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**	0.01	08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-40

2. Emission Source Description : Emergency generator (500 kW, diesel-fired), located at Phillips Hall [MACT]

3. Operating Scenario ID/ Description: OS - 87/One 500 kW diesel-fired emergency generator located at Phillips Hall

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 238 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS40	VERTICAL STACK	55	0.75	1139	155.2	4113.91	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	2.617	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00081	08			
Acrolein	**107-02-8**	0.00025	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00013	08			
Benzene	**71-43-2**	0.02491	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.0001	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.0001	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.0001	08			
Formaldehyde	**50-00-0**	0.00253	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00029	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00019	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.0001	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00417	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.0001	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00681	08			
Selenium Compounds	**SEC**	0.00048	08			
Toluene	**108-88-3**	0.00902	08			
Xylene	**1330-20-7**	0.0062	08			

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123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-42

2. Emission Source Description : Emergency generator (400kW, diesel-fired), located at the Dean Smith Center [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 126/One 400KW, diesel-fired generator located at the Dean Smith Center

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 145 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-Gen42	VERTICAL STACK	12	0.75	950	162.5	4307.41	Emergency engine exhaust

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	1.5911	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.04	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.01497	08			
Acrolein	**107-02-8**	0.00181	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00008	08			
Benzene	**71-43-2**	0.01821	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00006	08			
Butadiene, 1,3-	**106-99-0**	0.00076	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00006	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00006	08			
Formaldehyde	**50-00-0**	0.02303	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00018	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00012	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00006	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00166	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00006	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00328	08			
Selenium Compounds	**SEC**	0.00029	08			
Toluene	**108-88-3**	0.00798	08			
Xylene	**1330-20-7**	0.00556	08			

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-43

2. Emission Source Description : Emergency generator (125 kW, diesel-fired), located at the Medical Research Building B [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 116/125 kW Diesel-Fired Emergency Generator at Medical Research Building B

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 51 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-Gen43	VERTICAL STACK	7	0.38	950	156.21	1063	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	0.5583	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0	08			
NOx	**NOx**	0.02	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00525	08			
Acrolein	**107-02-8**	0.00063	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00003	08			
Benzene	**71-43-2**	0.00639	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00002	08			
Butadiene, 1,3-	**106-99-0**	0.00027	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00002	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00002	08			
Formaldehyde	**50-00-0**	0.00808	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00006	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00004	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00002	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00058	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00002	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00115	08			
Selenium Compounds	**SEC**	0.0001	08			
Toluene	**108-88-3**	0.0028	08			
Xylene	**1330-20-7**	0.00195	08			

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-48

2. Emission Source Description : Emergency generator (500 kW, diesel-fired), located at Kenan Stadium [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 117/500 kW Diesel-Fired EFP Emergency Generator at Kenan Stadium

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: 548 GAL/yr
(e.g. production or fuel use):

6. Fuel Information
(If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency
(% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-Gen48	VERTICAL STACK	9	0.667	1100	196.23	4114	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	6.0366	08			
Methane (CH4)	**74-82-8**	0.0002	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.03	08			
NOx	**NOx**	0.07	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00187	08			
Acrolein	**107-02-8**	0.00058	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.0003	08			
Benzene	**71-43-2**	0.05746	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00002	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00022	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00022	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00022	08			
Formaldehyde	**50-00-0**	0.00584	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00067	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00044	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00022	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00963	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00022	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.0157	08			
Selenium Compounds	**SEC**	0.00111	08			
Toluene	**108-88-3**	0.02081	08			
Xylene	**1330-20-7**	0.01429	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-50

2. Emission Source Description : Emergency generator (600 kW, diesel-fired) located at Beard Hall [MACT]

3. Operating Scenario ID/ Description: OS - 89/One 600 kW diesel-fired emergency generator located at Beard Hall

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 247 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS50	VERTICAL STACK	70	1	906	105.64	4978.16	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	2.7217	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00084	08			
Acrolein	**107-02-8**	0.00026	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00013	08			
Benzene	**71-43-2**	0.02591	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.0001	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.0001	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.0001	08			
Formaldehyde	**50-00-0**	0.00263	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.0003	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.0002	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.0001	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00434	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.0001	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00708	08			
Selenium Compounds	**SEC**	0.0005	08			
Toluene	**108-88-3**	0.00938	08			
Xylene	**1330-20-7**	0.00644	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-57

2. Emission Source Description : Emergency generator (600 kW, diesel-fired), located at the Bioinformatics Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 90/One 600 kW diesel-fired emergency generator located at the Bioinformatics Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 247 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS57	HORIZONTAL STACK	82	0.8	906	159.81	4820	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	2.7217	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.00084	08			
Acrolein	**107-02-8**	0.00026	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00013	08			
Benzene	**71-43-2**	0.02591	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.0001	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.0001	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.0001	08			
Formaldehyde	**50-00-0**	0.00263	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.0003	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.0002	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.0001	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00434	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.0001	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00708	08			
Selenium Compounds	**SEC**	0.0005	08			
Toluene	**108-88-3**	0.00938	08			
Xylene	**1330-20-7**	0.00644	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-59

2. Emission Source Description : Emergency generator (500 kW, diesel-fired) located at the Glaxo Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 91/One 500 kW diesel-fired emergency generator located at the Glaxo Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 999 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS59	VERTICAL STACK	14	0.67	906	190.8	4036.16	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	10.9915	08			
Methane (CH4)	**74-82-8**	0.0004	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.06	08			
NOx	**NOx**	0.13	08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0.01	08			
PM2.5	**PM2.5**	0.01	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0.01	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.0034	08			
Acrolein	**107-02-8**	0.00106	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00054	08			
Benzene	**71-43-2**	0.10462	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00003	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.0004	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.0004	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.0004	08			
Formaldehyde	**50-00-0**	0.01064	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00121	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00081	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.0004	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.01753	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.0004	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.02858	08			
Selenium Compounds	**SEC**	0.00202	08			
Toluene	**108-88-3**	0.03788	08			
Xylene	**1330-20-7**	0.02602	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-76

2. Emission Source Description : Emergency generator (500 kW, diesel-fired), located at the Northeast Chiller [MACT]

3. Operating Scenario ID/ Description: OS - 92/One 500 kW diesel-fired emergency generator located at the Northeast Chiller

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 206 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS76	VERTICAL STACK	45	1	1100	87.3	4113.91	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	2.2681	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.0007	08			
Acrolein	**107-02-8**	0.00022	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00011	08			
Benzene	**71-43-2**	0.02159	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00008	08			
Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00008	08			

Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00008	08			
Formaldehyde	**50-00-0**	0.0022	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00025	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00017	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00008	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00362	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00008	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.0059	08			
Selenium Compounds	**SEC**	0.00042	08			
Toluene	**108-88-3**	0.00782	08			
Xylene	**1330-20-7**	0.00537	08			

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-79

2. Emission Source Description : Emergency generator (300 kW, diesel-fired), located at the Carmichael Auditorium [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 99/One 400 kW diesel-fired emergency generator located at Carmichael Auditorium

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 140 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS79	VERTICAL STACK	14	0.833	914	114.68	3750	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Carbon Dioxide (CO2)	**124389**	1.5388	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.04	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				
Acetaldehyde	**75-07-0**	0.01448	08			
Acrolein	**107-02-8**	0.00175	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00008	08			
Benzene	**71-43-2**	0.01761	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00006	08			
Butadiene, 1,3-	**106-99-0**	0.00074	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00006	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00006	08			
Formaldehyde	**50-00-0**	0.02227	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00017	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00011	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00006	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.0016	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00006	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00317	08			
Selenium Compounds	**SEC**	0.00028	08			
Toluene	**108-88-3**	0.00772	08			
Xylene	**1330-20-7**	0.00538	08			

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As entered in AERO

Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-80

2. Emission Source Description : Emergency generator (300 kW, diesel-fired), located at the Hinton James Dorm [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 100/One 350 kW diesel-fired emergency generator located at the Hinton James Dorm

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 134 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS80	VERTICAL STACK	14	0.75	925.9	126.97	3365.61	Emergency generator stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	1.476	08			
Methane (CH4)	**74-82-8**	0.0001	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.04	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.01389	08			
Acrolein	**107-02-8**	0.00167	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00007	08			
Benzene	**71-43-2**	0.01689	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00005	08			
Butadiene, 1,3-	**106-99-0**	0.00071	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00005	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00005	08			
Formaldehyde	**50-00-0**	0.02136	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00016	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00011	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00005	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00154	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00005	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00304	08			
Selenium Compounds	**SEC**	0.00027	08			
Toluene	**108-88-3**	0.0074	08			
Xylene	**1330-20-7**	0.00516	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-81

2. Emission Source Description : Emergency generator (250 kW, diesel-fired), located at the Physicians Office Building [MACT ZZZZ, NSPS IIII]

3. Operating Scenario ID/ Description: OS - 101/One 250KW, diesel-fired generator located at the Physicians Office Building

4. SCC Number/Description: 20100102/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 104 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS81	VERTICAL STACK	92	0.8	1000	61.65	1859.32	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	1.1428	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.01075	08			
Acrolein	**107-02-8**	0.0013	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00006	08			
Benzene	**71-43-2**	0.01308	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00004	08			
Butadiene, 1,3-	**106-99-0**	0.00055	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00004	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00004	08			
Formaldehyde	**50-00-0**	0.01654	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00013	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00008	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00004	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00119	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00004	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00235	08			
Selenium Compounds	**SEC**	0.00021	08			
Toluene	**108-88-3**	0.00573	08			
Xylene	**1330-20-7**	0.00399	08			

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123 West Franklin Street, Suite 600B
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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID ES-Gen-84

2. Emission Source Description : Emergency generator (250 kW, diesel-fired), located at Bell Tower Parking Deck

3. Operating Scenario ID/ Description: OS - 109/250 kW Diesel-fired Emergency Generator at Bell Tower Parking Deck

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 99 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-IS84	VERTICAL STACK	10	0.583	854	140.03	2243	Emergency Generator Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	1.0904	08			
Methane (CH4)	**74-82-8**	0	08			
Nitrous Oxide (N2O)	**10024972**	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.01	08			
NOx	**NOx**	0.03	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	**75-07-0**	0.01026	08			
Acrolein	**107-02-8**	0.00124	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	**ASC-Other**	0.00005	08			
Benzene	**71-43-2**	0.01248	08			
Benzo(a)pyrene (Component of POMTV & POM7)	**50-32-8**	0	08			
Beryllium metal (unreacted) (Component of BEC)	**7440-41-7**	0.00004	08			
Butadiene, 1,3-	**106-99-0**	0.00052	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00004	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00004	08			
Formaldehyde	**50-00-0**	0.01578	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00012	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00008	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00004	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00113	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00004	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00225	08			
Selenium Compounds	**SEC**	0.0002	08			
Toluene	**108-88-3**	0.00547	08			
Xylene	**1330-20-7**	0.00381	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
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Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-51

2. Emission Source Description : Sterilizers - Dental School

3. Operating Scenario ID/ Description: OS - 25/Sterilizers - Dental School

4. SCC Number/Description: 49099998/Miscellaneous Volatile Organic Compound Evaporation ; Identify the Process and Solvent in Comments

5. Throughput/units in 2022: (e.g. production or fuel use):

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
F2	FUGITIVE (NO STACK)		1	72		Area = 1	Insignificant Fugitive Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**		08			
PM10	**PM10**		08			
PM2.5	**PM2.5**		08			
SO2	**SO2**		08			
VOC	**VOC**		08			
HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-53

2. Emission Source Description : Enclosed sorbent railcar dump pit, located in the Railcar Unloading Building (ID No. 020)

3. Operating Scenario ID/ Description: OS - 17/Enclosed sorbent railcar dump pit, located in the Railcar Unloading Building

4. SCC Number/Description: 30501040/Coal Mining, Cleaning, and Material Handling (See 305010) ; *Truck Unloading: End Dump - Coal

5. Throughput/units in 2022: (e.g. production or fuel use) 6774.69 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
F2	FUGITIVE (NO STACK)		1	72		Area = 1	Insignificant Fugitive Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (3) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**42%**	**March-May 2022**	**20%**	**June-Aug. 2022**	**24%**	**Sept.-Nov. 2022**	**14%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**	0.01	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**		08			
VOC	**VOC**		08			

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-Gen-31

2. Emission Source Description : Emergency generator (500kW, diesel-fired), located at the McGavran Greenberg Building [MACT ZZZZ]

3. Operating Scenario ID/ Description: OS - 130/500 kW Diesel-Fired Emergency Generator at McGavran Greenberg Building

4. SCC Number/Description: 20300101/Distillate Oil (Diesel) ; Reciprocating

5. Throughput/units in 2022: (e.g. production or fuel use): 260 GAL/yr

6. Fuel Information (If fuel is used)

%Sulfur	0.0015	%Ash	0	Heat Content (Btu/units)	135000 Btu/gallon

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-Gen31	VERTICAL STACK	10	0.75	847	237.3	6290.15	Emergency engine exhaust

Operating Scenario: OS - 130

Emission Source/Group ID: IES-Gen-31

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (1) Days per Week (1) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	124389	2.8613	08			
Methane (CH4)	74-82-8	0.0001	08			
Nitrous Oxide (N2O)	10024972	0	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	CO	0.01	08			
NOx	NOx	0.03	08			
TSP	TSP	0	08			
PM10	PM10	0	08			
PM2.5	PM2.5	0	08			
SO2	SO2	0	08			
VOC	VOC	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Acetaldehyde	75-07-0	0.00088	08			
Acrolein	107-02-8	0.00028	08			
Arsenic Unlisted Compounds (Specify & Component of ASC)	ASC-Other	0.00014	08			
Benzene	71-43-2	0.02723	08			
Benzo(a)pyrene (Component of POMTV & POM7)	50-32-8	0.00001	08			
Beryllium metal (unreacted) (Component of BEC)	7440-41-7	0.00011	08			

Cadmium Metal (elemental unreacted, Component of CDC)	**7440-43-9**	0.00011	08			
Chromic acid (VI) (Component of SolCR6 & CRC)	**7738-94-5**	0.00011	08			
Formaldehyde	**50-00-0**	0.00277	08			
Lead Unlisted Compounds (Specify and Component of PBC)	**PBC-Other**	0.00032	08			
Manganese Unlisted Compounds (Specify & Component of MNC)	**MNC-Other**	0.00021	08			
Mercury, vapor (Component of HGC)	**7439-97-6**	0.00011	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00456	08			
Nickel metal (Component of NIC)	**7440-02-0**	0.00011	08			
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	**POM**	0.00744	08			
Selenium Compounds	**SEC**	0.00053	08			
Toluene	**108-88-3**	0.00986	08			
Xylene	**1330-20-7**	0.00677	08			

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Facility Name: The University of North Carolina at Chapel Hill
123 West Franklin Street, Suite 600B
CB# 1005
Chapel Hill, NC 27599-1000

Facility ID : 6800043
Permit : 03069
County : Orange
DAQ Region : RRO

North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-SB-19

2. Emission Source Description : Sorbent Storage Silo with a bin vent filter, located at Cogeneration Facility

3. Operating Scenario ID/ Description: OS - 127/Two Hydrated Lime Storage Silos

4. SCC Number/Description: 31299999/Miscellaneous Machinery ; Other Not Classified

5. Throughput/units in 2022: (e.g. production or fuel use): 1220.85 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-SB19	HORIZONTAL STACK	60	0.9	72	61	2328.39	Sorbent Storage Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (2) Days per Week (5) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**		08			
VOC	**VOC**		08			

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-SB-20

2. Emission Source Description : Weigh/Feed Hopper with bin vent filters, blowers, piping and injection nozzles, located at Cogeneration Facility

3. Operating Scenario ID/ Description: OS - 128/Weigh Hopper with bin filters

4. SCC Number/Description: 31299999/Miscellaneous Machinery ; Other Not Classified

5. Throughput/units in 2022: 1220.85 TON/yr
(e.g. production or fuel use):

6. Fuel Information
(If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency
(% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-SB20	HORIZONTAL STACK	30	0.9	72	61	2328.39	Filter Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (2) Days per Week (5) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**		08			
VOC	**VOC**		08			

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-SB-21

2. Emission Source Description : Weigh/Hopper with bin vent filters, blowers, piping and injection nozzles, located at Cogeneration Facility

3. Operating Scenario ID/ Description: OS - 129/Weigh Hopper with bin filters

4. SCC Number/Description: 31299999/Miscellaneous Machinery ; Other Not Classified

5. Throughput/units in 2022: (e.g. production or fuel use): 1220.85 TON/yr

6. Fuel Information (If fuel is used)

%Sulfur		%Ash		Heat Content (Btu/units)	

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-SB21	HORIZONTAL STACK	30	0.9	72	61	2328.39	Filter Emissions

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (2) Days per Week (5) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**25%**	**June-Aug. 2022**	**25%**	**Sept.-Nov. 2022**	**25%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	**CAS**	**Emissions-GHG Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				

Criteria (NAAQS) Pollutants	**Pollutant Code**	**Emissions-Criteria Pollutants** (Tons/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**Ef Control**
		2022				
CO	**CO**		08			
NOx	**NOx**		08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**		08			
VOC	**VOC**		08			

HAP/TAP Pollutants (In Alphabetical Order)	**CAS** (see instructions)	**Emissions HAP/TAPS** (Pounds/Year)	**Emission Estimation Method Code** (See Instructions)	**Control Efficiency** (Net after all controls)	**Emission Factor**	**EF Control**
		2022				

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North Carolina Department of Environmental Quality
Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

1. Emission Source ID (from permit) or Emission Source Group ID IES-SB-6

2. Emission Source Description : One natural gas-fired boiler at Davie Hall; 2.52 million Btu per hour heat input capacity [MACT DDDDD]

3. Operating Scenario ID/ Description: OS - 119/2.52 MMBtu/hr Natural Gas-Fired Boiler at Davie Hall

4. SCC Number/Description: 10300603/Natural Gas ; < 10 Million Btu/hr

5. Throughput/units in 2022: (e.g. production or fuel use): 12057.12 E3FT3/yr

6. Fuel Information (If fuel is used)

%Sulfur	0	%Ash	0	Heat Content (Btu/units)	1026 Btu/CF

7. Capture Efficiency (% of Emissions from this Process Vented to Control Device or Stack):

8. Control Device Information :None

Order	CS-ID	CD ID (as listed in permit)	Control Device Description

9. Emission Release Point (ERP) Information: (Sources vented to more than one ERP use additional entry lines):

ERP ID	ERP Type	Height (in feet)	Diameter Circle (enter #): Rectangle (L x W) (in 0.1 feet)	Temperature (F)	Velocity (Feet/sec)	Volume Flow Rate (Acfm)	ERP Description
EP-SB6	VERTICAL STACK	55	1	300	14.89	702	Small Boiler Stack

10. Operating Schedule:(Source/OperatingScenario that best characterizes Calendar Year 2022)
Hours per Day (24) Days per Week (7) Weeks per Year (52)

11. Typical Start & End Times For Operating Scenario: Start: 0 End: 2359

12. Seasonal Periods Percent Annual Throughput:

Jan-Feb + Dec 2022	**25%**	**March-May 2022**	**28%**	**June-Aug. 2022**	**23%**	**Sept.-Nov. 2022**	**24%**

13. Actual Emissions per Pollutant Listed :
Attach calculations and documentation of emission factors or other estimation methods used.

GHG Pollutants	CAS	Emissions-GHG Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
Carbon Dioxide (CO2)	**124389**	72.3532	08			
Methane (CH4)	**74-82-8**	0.0014	08			
Nitrous Oxide (N2O)	**10024972**	0.0001	08			

Criteria (NAAQS) Pollutants	Pollutant Code	Emissions-Criteria Pollutants (Tons/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	Ef Control
		2022				
CO	**CO**	0.05	08			
NOx	**NOx**	0.06	08			
TSP	**TSP**	0	08			
PM10	**PM10**	0	08			
PM2.5	**PM2.5**	0	08			
SO2	**SO2**	0	08			
VOC	**VOC**	0	08			

HAP/TAP Pollutants (In Alphabetical Order)	CAS (see instructions)	Emissions HAP/TAPS (Pounds/Year)	Emission Estimation Method Code (See Instructions)	Control Efficiency (Net after all controls)	Emission Factor	EF Control
		2022				
Benzene	**71-43-2**	0.00253	08			
Cobalt Unlisted Compound (Specify & Component of COC)	**COC-Other**	0.0001	08			
Formaldehyde	**50-00-0**	0.09043	08			
Hexane, n-	**110-54-3**	2.17028	08			
Naphthalene (Component of POMTV)	**91-20-3**	0.00074	08			
Selenium Compounds	**SEC**	0.00003	08			
Toluene	**108-88-3**	0.0041	08			

Facility Total CY 2022 Emissions Summary

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Division of Air Quality
Air Pollutant Point Source Emissions Inventory - Calendar Year 2022

Record Facility-Wide Totals From all Permitted and Non-Permitted AirPollutant Emission Sources

Green House Gases Pollutants(GHG)

		Actual Emissions (Tons/Year)		
Pollutant	**CAS**	**2022**	**2021**	**% Change**
Carbon Dioxide (CO2)	124389	197531.98	221218.9758	-10.707483%
Methane (CH4)	74-82-8	12.6994	15.4366	-17.731882%
Nitrous Oxide (N2O)	10024972	1.7791	2.1765	-18.258678%

Criteria Pollutants

		Actual Emissions (Tons/Year)		
Pollutant	**CAS**	**2022**	**2021**	**% Change**
CO	CO	69.78	78.73	-11.367972%
NOx	NOx	125.41	158.57	-20.911901%
PM(TSP)	TSP	17.52	8.3	111.084335%
PM10	PM10	17.51	8.29	111.21834%
PM2.5	PM2.5	17.46	8.21	112.667465%
SO2	SO2	160.49	204.03	-21.339996%
VOC	VOC	4.67	4.43	5.417613%

Hazardous Air Pollutants(HAPS) and/or Toxic Air Pollutants(TAPs)

		Actual Emissions (Pounds/Year)		
Pollutant	**CAS**	**2022**	**2021**	**% Change**
Pollutant Group: Antimony & Compounds (total mass, inc elemental SB) **Group Sum:**.29553				
Antimony Unlisted Compounds (Specify & Component of SBC)	SBC-Other	0.29553	.37321	-20.814024%
Pollutant Group: Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) **Group Sum:**.62577				
Arsenic Unlisted Compounds (Specify & Component of ASC)	ASC-Other	0.62577	.63329	-1.1874528%
Pollutant Group: Beryllium & compounds (Total mass) **Group Sum:**.1228				
Beryllium metal (unreacted) (Component of BEC)	7440-41-7	0.1228	.08879	38.303864%
Pollutant Group: Cadmium & compounds (total mass inc elemental metal) **Group Sum:**1.66605				
Cadmium Metal (elemental unreacted, Component of CDC)	7440-43-9	1.66605	1.6354	1.874153%
Pollutant Group: Chlorinated Dioxin Compounds of interest as HAP or TAP **Group Sum:**0				

Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (Component of CLDC & POMTV)	1746-01-6	0.0	Not reported	N/A
Pollutant Group: Chromium (VI) Soluble Chromate Compounds (Component of CRC) **Group Sum:**1.9371				
Chromic acid (VI) (Component of SolCR6 & CRC)	7738-94-5	1.9371	1.87778	3.1590545%
Pollutant Group: Chromium - All/Total (Inc Chromium (VI) categories, metal and Others) **Group Sum:**1.9371				
Chromic acid (VI) (Component of SolCR6 & CRC)	7738-94-5	1.9371	1.87778	3.1590545%
Pollutant Group: Cobalt compounds **Group Sum:**.36707				
Cobalt Unlisted Compound (Specify & Component of COC)	COC-Other	0.36707	.43248	-15.124403%
Pollutant Group: Cyanide compounds (see also hydrogen cyanide) **Group Sum:**91.8625				
Cyanide Unlisted Compounds (Specify & Component of CNC)	CNC-Other	91.8625	115.969	-20.78702%
Pollutant Group: Lead and Lead compounds **Group Sum:**2.4768				
Lead Unlisted Compounds (Specify and Component of PBC)	PBC-Other	2.4768	2.75532	-10.108448%
Pollutant Group: Manganese & compounds **Group Sum:**11.52474				
Manganese Unlisted Compounds (Specify & Component of MNC)	MNC-Other	11.52474	14.28454	-19.320187%
Pollutant Group: Mercury & Compounds - all total mass, inc Hg Vapor **Group Sum:**.47371				
Mercury, vapor (Component of HGC)	7439-97-6	0.47371	.43468	8.979015%
Pollutant Group: Nickel & Compounds, sum total mass, inc elemental **Group Sum:**11.75346				
Nickel metal (Component of NIC)	7440-02-0	11.75346	14.00111	-16.053371%
Pollutant Group: Polycyclic Organic Matter (7 PAH Compounds for NIF) **Group Sum:**.00302				
Benzo(a)pyrene (Component of POMTV & POM7)	50-32-8	0.00302	.00273	10.622706%
Pollutant Group: Polycyclic Organic Matter (Specific Compounds from OAQPS for TV) **Group Sum:**2.19503				
Benzo(a)pyrene (Component of POMTV & POM7)	50-32-8	0.00302	.00273	10.622706%
Biphenyl (Component of POMTV)	92-52-4	0.06246	.07885	-20.786303%
Furans - Dibenzofurans (group total - CAA - unchlorinated) (Component of POMTV)	132-64-9	0.00739	.00932	-20.708157%
Naphthalene (Component of POMTV)	91-20-3	2.12216	1.90782	11.234812%
Tetrachlorodibenzo-p-dioxin, 2,3,7,8- (Component of CLDC & POMTV)	1746-01-6	0.0	Not reported	N/A
Acetaldehyde	75-07-0	22.06447	27.36082	-19.357426%
Acetophenone	98-86-2	0.55118	.69581	-20.785849%
Acrolein	107-02-8	10.81735	13.57803	-20.331959%
Ammonia (as NH3)	7664-41-7	4301.3345	4250.0228	1.2073234%
Benzene	71-43-2	56.11418	66.49539	-15.611925%
Benzyl chloride	100-44-7	25.7215	32.47132	-20.787022%
Bromine	7726-95-6	7.44548	9.39918	-20.78586%
Bromoform	75-25-2	1.43305	1.80912	-20.787455%
Butadiene, 1,3-	106-99-0	0.05041	.04238	18.94761%
Carbon disulfide	75-15-0	4.77685	6.03039	-20.78704%
Chlorine	7782-50-5	98.06373	123.79586	-20.785938%
Chloroacetophenone, 2-	532-27-4	0.25722	.32472	-20.787138%
Chlorobenzene	108-90-7	0.80839	1.02053	-20.787235%
Chloroform	67-66-3	2.16795	2.73687	-20.787254%
Cumene	98-82-8	0.19474	.24585	-20.789099%

Di(2-ethylhexyl)phthalate (DEHP)	117-81-7	2.68238	3.38629	-20.78706%
Dichlorobenzene(p), 1,4-	106-46-7	1.61301	1.59376	1.2078378%
Dimethyl sulfate	77-78-1	1.76376	2.2266	-20.786848%
Dinitrotoluene, 2,4-	121-14-2	0.01029	.01299	-20.785221%
Ethyl benzene	100-41-4	3.531	4.36044	-19.02193%
Ethyl chloride (chloroethane)	75-00-3	1.54329	1.94828	-20.787052%
Ethylene dibromide	106-93-4	0.0441	.05567	-20.783186%
Ethylene dichloride (1,2-dichloroethane)	107-06-2	1.4698	1.8555	-20.78685%
Ethylene oxide	75-21-8	0.0	2.13	-100.0%
Fluorides (sum of all fluoride compounds)	16984-48-8	213.69708	265.44701	-19.495394%
Formaldehyde	50-00-0	168.02315	177.52562	-5.3527327%
Hexane, n-	110-54-3	2446.2578	2416.66878	1.224376%
Hydrogen chloride (hydrochloric acid)	7647-01-0	11749.933	20114.93748	-41.586037%
Hydrogen fluoride (hydrofluoric acid as mass of HF- Component of Fluorides)	7664-39-3	208.83894	263.63861	-20.785904%
Isophorone	78-59-1	21.3121	26.90481	-20.78703%
Methyl bromide	74-83-9	5.8792	7.42201	-20.786955%
Methyl chloride	74-87-3	19.47485	24.58542	-20.786999%
Methyl chloroform	71-55-6	0.75713	.92776	-18.391607%
Methyl ethyl ketone	78-93-3	14.33055	18.09117	-20.787043%
Methyl hydrazine	60-34-4	6.24665	7.8859	-20.7871%
Methyl methacrylate	80-62-6	0.7349	.92776	-20.787704%
Methyl tertiary butyl ether (MTBE)	1634-04-4	1.28608	1.62356	-20.786417%
Methylene chloride	75-09-2	10.65605	13.45241	-20.787056%
Perchloroethylene (tetrachloroethylene)	127-18-4	1.58003	1.99467	-20.787403%
Phenol	108-95-2	0.58792	.7422	-20.78685%
Phosphorus Metal, Yellow or White	7723-14-0	1.34977	1.70349	-20.764433%
Polycyclic Organic Matter (Inc PAH, dioxins, etc. NC & AP 42 historic amorphous glob)	POM	4.55202	4.27299	6.5300837%
Propionaldehyde	123-38-6	13.9631	17.62729	-20.787031%
Selenium Compounds	SEC	0.52564	.34415	52.735725%
Styrene	100-42-5	0.91863	1.15969	-20.786592%
Toluene	108-88-3	22.92604	16.9926	34.917797%
Vinyl acetate	108-05-4	0.27926	.35255	-20.788538%
Xylene	1330-20-7	2.86189	2.61414	9.477306%

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Comments From Facility: