

Commonwealth of Kentucky
Division for Air Quality
STATEMENT OF BASIS / SUMMARY

Conditional Major, Operating
Permit: F-26-012
Northern Kentucky University
Nunn Drive, Highland Heights, (Campbell) KY 41099
July 10, 2025
Ken Porter, Permit Review Branch

SOURCE ID: 21-037-00095
AGENCY INTEREST: 37575
ACTIVITY: APE20250002, APE20250001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and Description: 8221, Colleges, Universities, and Professional Schools

Single Source Det. Yes No If Yes, Affiliated Source AI:

Source-wide Limit Yes No If Yes, See Section 4, Table A

28 Source Category Yes No If Yes, Category:

County: Campbell

Nonattainment Area N/A PM₁₀ PM_{2.5} CO NO_x SO₂ Ozone Lead

PTE* greater than 100 tpy for any criteria air pollutant Yes No

If yes, for what pollutant(s)?

PM₁₀ PM_{2.5} CO NO_x SO₂ VOC

PTE* greater than 250 tpy for any criteria air pollutant Yes No

If yes, for what pollutant(s)?

PM₁₀ PM_{2.5} CO NO_x SO₂ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) Yes No

If yes, list which pollutant(s):

PTE* greater than 25 tpy for combined HAP Yes No

*PTE does not include self-imposed emission limitations.

Description of Facility:

Northern Kentucky University (NKU) is a public university that operates several indirect heat exchangers to meet the campus heat demands and several campus emergency generators. NKU is a growing metropolitan university of 14,800 students served by nearly 2,400 faculty and staff. The university is located in the suburb of Highland Heights, KY, seven(7) miles southeast of Cincinnati.

Permit: F 26 012

SECTION 2 – CURRENT APPLICATION

Permit Number: F-26-012

Activities: APE20250002 and APE20250001

Received: January 08, 2025 and June 23, 2025

Application Complete Date(s): July 10, 2025

Permit Action: Initial Renewal Significant Rev Minor Rev Administrative
 Construction/Modification Requested? Yes No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action Yes No

Description of Action:

APE20250002: Renewal with no changes

APE20250001: Revised with these changes

- Changed EU 43 fuel from natural gas to liquid propane
- For EU 34, removed G-02, G-07, G-09, and G-11, only G-08, G-14 & G-15 left in EU 34
- Added EU 44, EU 46, EU 52, and EU 53
- For EU 4-12, removed 4, 5, 10, and 12, only 7 left in EU 4-12
- Added EU 48, EU 49, EU 50, and EU 51
- For EU 19-21, removed 19
- Added EU 54
- For EU 22-27, removed 22, all of EU 22-27 has now been removed
- Added EU 55

F-26-012 Emission Summary				
Pollutant	*2024 Actual (tpy)	Previous PTE F-18-051 R2 (tpy)	Change (tpy)	PTE F-26-012 (tpy)
CO	0.875	86.48	-0.46	86.02
**NO _x	1.442	139.41	-7.91	131.50
PT	0.079	9.10	-0.59	8.51
PM ₁₀	0.079	7.58	-0.6	6.98
PM _{2.5}	0.020	4.38	-0.57	3.81
SO ₂	0.025	18.22	-15.44	2.78
VOC	0.057	8.13	-0.79	7.34
Lead	0.000	3.97E-04	-6.0E-06	3.91E-04
Greenhouse Gases				
Nitrous Oxide	0.023	1.90	-0.16	1.74
Carbon Dioxide	1,249.356	97,993	-1,844.38	96,148.62
Methane	0.024	3.29	-0.65	2.64
CO ₂ Equivalent	***1,256.123	98,641	-1,957.36	***96,683.64
Hazardous Air Pollutants (HAPs)				
Source wide HAPs or Combined HAPs	N/A	1.60	-0.06	1.54
Hexane; N-Hexane	N/A	1.313	-0.033	1.28

*Actual emissions taken from KY EIS 2024

**Source-wide emissions limitation of 90 tpy on NO_x.

*** Based on Global Warming Potential from Table A-1 in 40 CFR part 98 effective on January 1, 2025.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Units: 1 & 2-3		Three(3) Indirect Heat Exchangers				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method		
PM	0.27 lb/MMBtu for each boiler	401 KAR 59:015, Section 4(1)(c)	<i>Natural Gas</i> 7.6 lb/MMscf AP-42 1.4-2	Assumed to be in compliance when burning natural gas or No.2 fuel oil		
	20% Opacity for each boiler	401 KAR 59:015, Section 4(2) and 40 CFR 60.43c(c)	<i>No.2 Fuel Oil</i> 2 lb/10 ³ gal AP-42 1.3-1			
SO ₂	0.84 lb/MMBtu for each boiler (natural gas)	401 KAR 59:015, Section 5(1)(c)2.b.	<i>Natural Gas</i> 0.6 lb/MMscf AP-42 1.4-2	Fuel supplier certification		
	0.5 wt% sulfur fuel (fuel oil)	40 CFR 60.42c(d) and (i)	<i>No.2 Fuel Oil</i> 71 lb/10 ³ gal AP-42 1.3-1			
Process Description:						
Emission Unit:		Location	Primary Fuel (Process ID 1)	Secondary Fuel (Process ID 2)	Maximum Continuous Rating (MMBtu/hr)	Construction Commenced
EU	EP					
1	#1 Boiler	Power Plant	Natural Gas	No. 2 Fuel Oil	25.2	2002
2-3	#2 Boiler	Power Plant	Natural Gas	No. 2 Fuel Oil	60.7	2002
	#3 Boiler	Power Plant	Natural Gas	No. 2 Fuel Oil	60.7	2002
Applicable Regulation:						
<p>401 KAR 59:015, <i>New indirect heat exchangers</i> applies to emissions units with a rated capacity greater than 1 MMBtu/hr and less than 250 MMBtu/hr, which commenced on or after April 9, 1972.</p> <p>401 KAR 60:005, Section 2(2)(d) 40 C.F.R. 60.40c through 60.48c (Subpart Dc), <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i> applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.</p>						
Precluded Regulations:						
<p>401 KAR 63:002, Section 2(4)(jjjj) 40 C.F.R. 63.11193 through 63.11237, Tables 1 through 8 (Subpart JJJJJ), <i>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources</i>. This regulation does not apply to natural gas fired boilers, and precluded if No. 2 Fuel Oil is only used for periods of gas curtailment, gas supply interruption, startup, or for periodic testing, maintenance, or operator training on liquid fuel. [40 CFR 63.11195(e)].</p>						
Comments:						
See Appendix B – Indirect Heat Exchangers Emission Limits for details on how emission limitations were set for this unit.						

Emission Units: 4-12 One(1) Indirect Heat Exchanger							
Pollutant		Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard		Emission Factor Used and Basis	Compliance Method
PM		0.1 lb/MMBtu		401 KAR 59:015, Section 4(1)(b)		<i>Natural Gas</i> 7.6 lb/MMscf AP-42 1.4-2 <i>No.2 Fuel Oil</i> 2 lb/10 ³ gal AP-42 1.3-1	Assumed to be in compliance when burning natural gas or No.2 fuel oil
		20% Opacity		401 KAR 59:015, Section 4(2)			
SO ₂		0.8 lb/MMBtu		401 KAR 59:015, Section 5(1)(b)1		<i>Natural Gas</i> 0.6 lb/MMscf AP-42 1.4-2 <i>No.2 Fuel Oil</i> 71 lb/10 ³ gal AP-42 1.3-1	
Emission Unit:		Location	Primary Fuel (Process ID 1)	Secondary Fuel (Process ID 2)	Maximum Continuous Rating (MMBtu/hr)	Construction Commenced	
EU	EP						
4-12	7	Ceramics	Natural Gas	No. 2 Fuel Oil	2.45	1996	
<p>Applicable Regulation: 401 KAR 59:015, <i>New indirect heat exchangers</i> applies to emissions units with a rated capacity greater than 1 MMBtu/hr and less than 250 MMBtu/hr, which commenced on or after April 9, 1972.</p> <p>Precluded Regulations: 401 KAR 63:002, Section 2(4)(jjjj) 40 C.F.R. 63.11193 through 63.11237, Tables 1 through 8 (Subpart JJJJJ), <i>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources</i>. This regulation does not apply to natural gas fired boilers, and precluded if No. 2 Fuel Oil is only used for periods of gas curtailment, gas supply interruption, startup, or for periodic testing, maintenance, or operator training on liquid fuel. [40 CFR 63.11195(e)].</p> <p>Comments: See Appendix B – Indirect Heat Exchangers Emission Limits for details on how emission limitations were set for this unit.</p>							

Emission Units: EU 19-21 & EU 34 Five(5) Emergency Generators					
Emission Units:		Location	Maximum Continuous Rating (hp)	Fuel	Construction Commenced
EU	EP				
19-21	20	Science Center	1,180	Diesel	2000
	21	Applied Science & Technology Center	760	Diesel	1995
34	G-08	Nunn Hall	116	Diesel	Prior to 2004
	G-14	University Center	170	Diesel	Prior to 2004
	G-15	Callahan Hall	288	Diesel	Prior to 2004

Applicable Regulation:
401 KAR 63:020, *Potentially hazardous matter or toxic substances*

Precluded Regulation:
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applicable to stationary RICE located at a major or area source of HAP emissions. Existing institutional emergency stationary RICE located at an area source of HAP emissions are not subject to this subpart.

Emission Units: 45, 47, 48, 49, 50, 51, & 55 Seven(7) Indirect Heat Exchangers					
Pollutant	Emission Limit or Standard (lb/MMBtu)		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	45	0.28	401 KAR 59:015, Section 4(1)(b)	7.6 lb/MMscf AP-42 1.4-2	Assumed to be in compliance when burning natural gas
	47	0.29			
	48	0.28			
	49	0.28			
	50	0.28			
	51	0.28			
	55	0.28			
	20% Opacity		401 KAR 59:015, Section 4(2)		
SO ₂	45	0.91	401 KAR 59:015, Section 5(1)(c)2.b.	0.6 lb/MMscf AP-42 1.4-2	
	47	0.93			
	48	0.92			
	49	0.92			
	50	0.92			
	51	0.92			
	55	0.92			

Process Description:

Emission Units:	Location	Model	Fuel	Maximum Continuous Rating (MMBtu/hr)	Construction Commenced
45	Callahan Hall Dorm	Benchmark Platinum BMK 3000	Natural Gas	3.0	4/2022
47	Callahan Hall Dorm	Benchmark Platinum BMK 3000	Natural Gas	3.0	9/2022
48	Norse Hall (Boiler #1)	Crest Condensing Boiler Model: FBN2001	Natural Gas	2.0	10/2021
49	Norse Hall (Boiler #2)	Lochinvar Crest FBN2001 Series 100	Natural Gas	2.0	10/2021
50	University Suites (Boiler #1)	Lochinvar Crest FBN2000N Model: 2333	Natural Gas	2.0	11/2023
51	University Suites (Boiler #2)	Lochinvar Crest FBN2000N Model: 2333	Natural Gas	2.0	11/2023
55	Callahan Hall #3	Benchmark Platinum BMK 3000	Natural Gas	3.0	11/2022

Applicable Regulations:

401 KAR 59:015, *New indirect heat exchangers* applies to emissions units with a rated capacity greater than 1 MMBtu/hr and less than 250 MMBtu/hr, which commenced on or after April 9, 1972.

Comments:

See **Appendix B – Indirect Heat Exchangers Emission Limits** for details on how emission limitations were set for this unit.

Emission Units: 28, 29, 31, 35, 44, 46, 52 & 54 Diesel Fired Emergency Generators						
Emission Unit		Location	Model	Maximum Continuous Rating (hp)	Fuel	Construction Commenced
EU	EP					
28	G-16	Student Union	Koehler 300 REOZV	400	Diesel	2008
29	G-17	Bank of Kentucky	Koehler 1000 REOZDC	1,300	Diesel	2008
31	G-20	Maintenance Building	Koehler 500REOZVB	757	Diesel	8/1/2011
35	G-21	Northern Terrace	Cummins 80DSFAE	145	Diesel	2013
44	G-02	Math, Education, and Psychology	Cummins C150D6D	237	Diesel	6/2022
46	G-07	Landrum Hall	Kohler 125REOZJG	167	Diesel	5/2022
52	G-09	Dorm Complex	Cummins GCTAA	352	Diesel	1/2024
54	19	Steely Library	Cummins DQCB	352	Diesel	6/2024

Applicable Regulation:

401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* is applicable to stationary RICE located at a major or area source of HAP emissions.

401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (**Subpart III**), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* is applicable to a stationary CI ICE that commence construction after July 11, 2005 and are manufactured after April 1, 2006.

Emission Units: 30 & 38 Two(2) Natural Gas Fired Emergency Generators						
Emission Units:		Location	Model	Maximum Continuous Rating (hp)	Fuel	Construction Commenced
EU	EP					
30		Soccer Stadium	Cummins GGHE-7530897; WSG-1068	176	Natural Gas	12/1/2008
38		Fine Arts Building	Cummins GGHG	137	Natural Gas	3/1/2008

Applicable Regulation:
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* is applicable to stationary RICE located at a major or area source of HAP emissions.

Comments:
 These units are not subject to 40 CFR 60, Subpart JJJJ because these units are emergency generators greater than 25 hp and were manufactured before January 1, 2009. [40 CFR 60.4230(a)(4)(iv) and 40 CFR 63.6590(c)(1)]

**Emission Units: 32, 33, 36, 37, 39, 40, 41, 42, 43, & 53
 Nine(9) Natural Gas & One(1) Propane Emergency Generators**

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
NO _x FOR EU: 32, 33, 36, 37, 40, 41, 42, 43	2.0 g/HP-hr or 160 ppmvd at 15% O ₂	40 CFR 60.4233 referencing Table 1 of 40 CFR 60, Subpart JJJJ	2,254.2 lb/MMscf AP 42 Table 3.2-3	Installation of a certified engine according to 40 CFR 1098
NO _x FOR EU: 39,53	10 g/HP-hr or N/A ppmvd at 15% O ₂		3,794.4 lb/MMscf AP 42 Table 3.2-3	
CO FOR EU: 32, 33, 36, 37, 40, 41, 42, 43	4.0 g/HP-hr or 540 ppmvd at 15% O ₂		30.192 lb/MMscf AP 42 Table 3.2-3	
CO FOR EU: 39,53	387 g/HP-hr or N/A ppmvd at 15% O ₂			
VOC FOR EU: 33, 36, 37, 40, 41, 42, 43	1.0 g/HP-hr or 86 ppmvd at 15% O ₂			
VOC FOR EU: 39,53	N/A			

Process Description:

Emission Units:		Location	Model	Fuel	Max. Rating (hp)	Construction Commenced
EU	EP					
32		Griffin Hall	Generac SG300	Natural Gas	402	12/1/2010
33		Educational Services/ Administration Center	Kohler 350REXVB	Natural Gas	530	2012
36	G-06a	Albright Health Center	Kohler 150REZGC	Natural Gas	260	2015
37	G-06b	Albright Health Center	Kohler 150REZGC	Natural Gas	260	2015
39	G-03	University Police Building	Generac 65520	Natural Gas	30	3/18/2015
40		Health Innovation Center	Kohler 350REZXVB	Natural Gas	530	12/9/2016
41		Health Innovation Center	Kohler 350REZXVB	Natural Gas	530	12/9/2016
42		New Residence Hall (HJ)	Kohler 200REZXB	Natural Gas	302	7/2021
43		University Police Station	Kohler KG100	Propane	175	4/2022
53	G-11	Reagents Hall	Kohler KG2204T	Natural Gas	64.1	11/2023

Applicable Regulation:

401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (**Subpart JJJJ**), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*.

401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, *Engines* is applicable to stationary RICE located at a major or area source of HAP emissions.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements/Results

N/A

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
90 tpy of NOx emissions	To preclude the applicability of 401 KAR 52:020, <i>Title V Permits</i>	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulation	Emission Unit
401 KAR 59:015, <i>New indirect heat exchangers</i>	1, 2-3, 4-12, 45, 47, 48, 49, 50, 51, & 55
401 KAR 60:005, Section 2(2)(d) 40 C.F.R. 60.40c through 60.48c (Subpart Dc) <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i>	1 & 2-3
401 KAR 63:020, <i>Potentially hazardous matter or toxic substances</i>	1, 2-3, 4-12, 19-21, 34, 45, 47, 48, 49, 50, 51, & 55
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>	28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 52, 53 & 54
401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 through 60.4219, Tables 1 to 8 (Subpart IIII), <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i>	28, 29, 31, 35, 44, 46, 52, & 54
401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), <i>Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.</i>	32, 33, 36, 37, 39 40, 41 42, 43 & 53

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020 <i>Title V permit</i>	Source-wide
401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 through 63.11237, Tables 1 through 8 (Subpart JJJJJ), <i>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.</i>	1, 2-3, 4-12
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,</i>	19-21 & 34

Table D - Summary of Non Applicable Regulations:

N/A

Air Toxic Analysis

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*

The Division for Air Quality (Division) has performed SCREEN3 on November 9, 2018 of potentially hazardous matter or toxic substances that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

Single Source Determination

N/A

SECTION 5 - PERMITTING HISTORY

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
F-02-025	Initial Issuance		12/12/2002	6/25/2003	Initial Permit
F-02-025 R1	Minor Revision	APE20060003	8/16/2006	10/26/2006	Addition of EU 16 and EU 17
F-02-025 R2	Minor Revision	APE20070003	8/16/2007	8/17/2007	Addition of Existing Diesel Generators
F-08-007	Renewal	APE20080001	3/7/2008	3/7/2008	Operate/Construction Permit
F-08-007 R1	Minor Revision	APE20080002	7/3/2008	7/15/2008	Addition of EU 28 and EU 29
F-08-007 R2	Minor Revision	APE20110001	3/22/2011	4/1/2011	Addition of EU 30
F-13-028	Renewal	APE20130001	6/21/2013	11/19/2013	Renewal Permit
F-13-028 R1	Revision 1	APE20150001	6/26/2015	7/14/2015	Addition of two emergency generators
F-13-028 R2	Revision 2	APE20160001	3/29/2016	7/6/2016	Addition of two emergency generators
F-18-051	Renewal	APE20180005	11/7/2018	6/16/2020	Renewal
F-18-051 R1	Revision	APE20210002 APE20210004	2/2/2022	2/27/2022	Addition of NG generator and removal of heaters
F-18-051 R2	Revision	APE20220001 APE20220002 APE20220003	5/22/2023	8/16/2023	Addition of a one(1) propane, two(2) diesel emergency engines, two(2)NG boilers and removal of two(2) NG boilers

SECTION 6 – PERMIT APPLICATION HISTORY

None

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS	–	Ambient Air Quality Standards
BACT	–	Best Available Control Technology
Btu	–	British thermal unit
CAM	–	Compliance Assurance Monitoring
CO	–	Carbon Monoxide
Division	–	Kentucky Division for Air Quality
ESP	–	Electrostatic Precipitator
GHG	–	Greenhouse Gas
HAP	–	Hazardous Air Pollutant
HF	–	Hydrogen Fluoride (Gaseous)
MSDS	–	Material Safety Data Sheets
mmHg	–	Millimeter of mercury column height
NAAQS	–	National Ambient Air Quality Standards
NESHAP	–	National Emissions Standards for Hazardous Air Pollutants
NO _x	–	Nitrogen Oxides
PM	–	Particulate Matter
PM ₁₀	–	Particulate Matter equal to or smaller than 10 micrometers
PM _{2.5}	–	Particulate Matter equal to or smaller than 2.5 micrometers
PSD	–	Prevention of Significant Deterioration
PTE	–	Potential to Emit
SO ₂	–	Sulfur Dioxide
TF	–	Total Fluoride (Particulate & Gaseous)
VOC	–	Volatile Organic Compounds
MMBtu/hr	–	million BTU per hour

APPENDIX B – INDIRECT HEAT EXCHANGERS EMISSION LIMITATIONS

*Information prior to 2002 not available.

EU	Location	Construction Date			Total Heat Input Capacity (MMBtu/hr)	PM Limit (lb/MMBtu)	SO ₂ Limit (lb/MMBtu)	Notes
		Added	Capacity (MMBtu/hr)	Removed				
4 (4-12)	Norse Hall #1	1992	3.0		N/A*	0.1	0.8	New Unit is 2021 EU 48 (2.0)
5 (4-12)	Norse Hall #2	1992	1.8		N/A*	0.1	0.8	New Unit is 2021 EU49 (2.0)
6 (4-12)	Woodcrest	1992	1.8		N/A*	0.1	0.8	Removed in 2022
7 (4-12)	Ceramics	1996	2.45		N/A*	0.1	0.8	
1	Power Plant #1 Boiler	2002	25.2		219.81	0.27	0.84	
2 (2-3)	Power Plant #2 Boiler	2002	60.7		219.81	0.27	0.84	
3 (2-3)	Power Plant #3 Boiler	2002	60.7		219.81	0.27	0.84	
10 (4-12)	University Suites #1	2003	2.0		225.81	0.27	0.83	New Unit is 2023 EU 50 (2.0)
11 (4-12)	University Suites #2	2003	2.0		225.81	0.27	0.83	Removed in 2022
12 (4-12)	University Suites #3	2003	2.0		225.81	0.27	0.83	New Unit is 2023 EU 51 (2.0)
22 (22-27)	Callahan Building	2008	2.0		182.06*	0.28	0.91	New Unit is 2022 EU 55 (3.0)
23 (22-27)	Callahan Building	2008	2.0		182.06	0.28	0.91	Removed 9/2022
24 (22-27)	Callahan Building	2008	2.0		182.06	0.28	0.91	Removed 9/2022
25 (22-27)	Callahan Building	2008	1.0		182.06	0.28	0.91	Removed in 2021
26 (22-27)	Callahan Building	2008	1.0		182.06	0.28	0.91	Removed in 2021
27 (22-27)	Callahan Building	2008	1.0		182.06	0.28	0.91	Removed in 2021

EU	Location	Construction Date			Total Heat Input Capacity (MMBtu/hr)	PM Limit (lb/MMBtu)	SO ₂ Limit (lb/MMBtu)	Notes
		Added	Capacity (MMBtu/hr)	Removed				
4 (4-12)	Norse Hall #1		3.0	2021	174.26			New Unit is 2021 EU 48 Old Unit 1992 EU4 (1.8)
5 (4-12)	Norse Hall #2		1.8	2021	174.26			New Unit is 2021 EU 49 Old Unit 1992 EU5 (1.8)
25 (22-27)	Callahan Building		1.0	2021	174.26			Unit was 2008 EU 25 (1.0) of EU 22-27
26 (22-27)	Callahan Building		1.0	2021	174.26			Unit was 2008 EU 26 (1.0) of EU 22-27
27 (22-27)	Callahan Building		1.0	2021	174.26			Unit was 2008 EU 27 (1.0) of EU 22-27
48	Norse Hall (Boiler #1)	2021	2.0		178.26	0.28	0.92	Old unit was 1992 EU4 (3.0) of EU 4-12
49	Norse Hall (Boiler #2)	2021	2.0		178.26	0.28	0.92	Old unit was 1992 EU5 (1.8) of EU 4-12
45	Callahan Hall Dorm	4/2022	3.0		181.26	0.28	0.91	
6 (4-12)	Woodcrest		1.8	2022	171.46			Unit was 1992 EU 6 (1.8) of EU 4-12
11 (4-12)	University Suites #2		2.0	2022	171.46			Unit was 2003 EU 11 (2.0) of EU 4-12
22 (4-12)	Callahan Building		2.0	2022	171.46			New Unit is EU 55 Old Unit 2008 EU22 (2.0)
23 (22-27)	Callahan Building		2.0	9/2022	171.46			Unit was 2008 EU 23 (2.0) of EU 22-27
24 (22-27)	Callahan Building		2.0	9/2022	171.46			Unit was 2008 EU 24 (2.0) of EU 22-27
47	Callahan Hall Dorm	9/2022	3.0		174.46	0.29	0.93	
55	Callahan Hall #3	2022	3.0		177.46	0.28	0.92	Old Unit was 2008 EU 22 (2.0) of EU 22-27
10 (4-12)	University Suites #1		2.0	2023	173.46			New Unit is EU 50 Old Unit 2003 EU10 (2.0)

EU	Location	Construction Date			Total Heat Input Capacity (MMBtu/hr)	PM Limit (lb/MMBtu)	SO ₂ Limit (lb/MMBtu)	Notes
		Added	Capacity (MMBtu/hr)	Removed				
12 (4-12)	University Suites #3		2.0	2023	173.46			New unit is EU 51 Old Unit 2003 EU12 (2.0)
50	University Suites Boiler #1	2023	2.0		177.46	0.28	0.92	Old unit was 2003 EU10 (2.0) of EU 4-12
51	University Suites Boiler #2	2023	2.0		177.46	0.28	0.92	Old unit was 2003 EU12 (2.0) of EU 4-12