



UNIVERSITY OF  
NOTRE DAME

FACILITIES DESIGN AND OPERATIONS

June 19, 2024

**CERTIFIED MAIL**

7019 2280 0002 1637 6666

Mr. Jay Koch  
IDEM – Office of Air Quality  
Air Quality Standards and Implementation Section – Mail Code 61-51  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

Re: University of Notre Dame 2022 Emissions Statement and Certification Form

Dear Jay,

The University of Notre Dame has entered its 2023 Emissions Statement data into the online Emissions Inventory Tracking System (EMITS). Please find attached the University's 2023 completed and signed IDEM AES-01 Air Emission Statement Certification Form as well as the detailed emissions report from the EMITS program.

Sincerely,

Paul A. Kempf, P.E.  
Assistant Vice President of Utilities & Maintenance

cc: Erin Hafner, Assistant Director, Risk Management and Safety w/Encls.  
Michael R. Cira., Sr. Environmental & Safety Specialist w/Encls.

Recieved  
JUN 24 2024  
State of Indiana



AES-01

**AIR EMISSION STATEMENT CERTIFICATION**

State Form 52052 (3-05)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

**Instructions:**

- This is a required form for each air emission statement as well as any modifications.
- The certification supplied with a source's permit may be used in lieu of this form
- "Responsible Official" has the same meaning as defined in 326 IAC (34), and is usually designated in the General Information section of the permit.

IDEM - Office of Air Quality  
 Technical Support and Modeling Section - Mail Code 61-51  
 100 N. Senate Avenue  
 Indianapolis, IN 46204-2251  
 Telephone: (317) 233-0178 or  
 Toll Free: 1-800-451-6027 x30178 (within Indiana)  
<http://www.emissions.IN.gov/>

**Part A: Contact Information**

Part A is intended to provide basic information about the company submitting an Air Emission Statement and information on the Air Emission Statement preparer in case there is a question about the report.

1. Company Name: University of Notre Dame Du Lac		2. Source ID: 1814100013	
3. Mailing Address: 100 Facilities Building			
City: Notre Dame		State: IN	ZIP Code: 46556
4. Name of Emission Statement Preparer: Michael		Cira	
5. Title of Emission Statement Preparer (optional): Senior Environment & Safety Specialist			
6. Telephone Number: (574)-631-7710		7. Facsimile Number (optional):	
8. Electronic Mail Address (optional): mcira2@nd.edu			

**Part B: Emissions Summary**

Part B is intended to aid in the review of data and to collect information about billable hazardous air pollutants

Emissions Statement Pollutants (Plant Wide)	Tons Emitted
Ammonia	0.9008
Carbon Monoxide (CO)	67.0234
Condensable Particulate Matter (PM-CON)	5.7411
Filterable Particulate Matter <10 Microns (PM10-FIL)	2.3208
Lead (PB)	0.0004
Nitrogen Dioxide (NO2)	190.6564
Primary PM2.5, Filterable Portion Only	2.3200
Sulfur Dioxide (SO2)	0.9336
Volatile Organic Compounds (VOC)	5.2520
Part 70 Permit Billable Hazardous Air Pollutants (Plant Wide)	Tons Emitted
Mercury and Mercury Compounds (CAS#7439976 and TRI ID N458)	0.0000

Recieved  
 JUN 24 2024  
 State of Indiana

**Part C: Signature of Responsible Official**

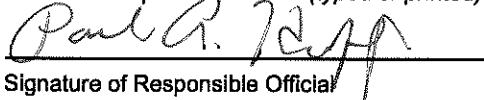
I hereby certify that the information in this emission statement is accurate based on reasonable estimates using data available to the prepares and on a reasonable inquiry into records and persons responsible for the operation of the source, and is true, accurate, and complete.

Paul Kempf

Assistant Vice President

Name of Responsible Official (typed or printed)

Title of Responsible Official



6/19/2024

Signature of Responsible Official

Date (month, day, year)

**Facility Emission Detail****University of Notre Dame Du Lac****Plant ID:1814100013****Report for 2023****Location: 636 Grace Hall,Notre Dame,46556****NAICS: 61131 Colleges, Universities, and Professional Schools**

<b>Facility Emissions Overview</b>		
<b>Pollutant</b>	<b>Pollutant Description</b>	<b>Emissions (Tons)</b>
NH3	Ammonia	0.9008
CO	Carbon Monoxide	67.0234
7439921	Lead	0.0004
NOX	Nitrogen Oxides	190.6564
PM-CON	Primary PM Condensable Only (All Less Than 1 Micron)	5.7411
PM10-FIL	Primary PM10, Filterable Portion Only	2.3208
PM25-FIL	Primary PM2.5, Filterable Portion Only	2.3200
SO2	Sulfur Dioxide	0.9336
VOC	Volatile Organic Compounds	5.2520

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: 001</b>		<b>Group Description:BOILER NO. 1</b>			
<b>Percent Quarterly Throughput</b>					
<b>Winter: 64</b>	<b>Spring: 20</b>	<b>Summer: 7</b>	<b>Fall: 9</b>		
<b>Days Per Week: 3</b>	<b>Weeks Per Year: 23</b>	<b>Hours Per Day: 11</b>	<b>Hours Per Year: 702</b>		
<b>Process ID: 01</b>		<b>Process Description: O-TYPE BLR.-No. 2 Fuel OIL</b>			
<b>SCC:</b>	10300501	<b>Stack:</b>	1		
	Commercial/Institutional	<b>Description:</b>	BOILERS # 1, 2 & 3		
	Distillate Oil	<b>Stack Type:</b>	Vertical		
	Grades 1 and 2 Oil	<b>Height:</b>	191		
<b>Heat Content:</b>	138.13	<b>Diameter:</b>	8		
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	400		
<b>Ash Content:</b>	0	<b>Velocity:</b>	43.9		
<b>Throughput:</b>	0.1257 1000 Gallons	<b>Gas Flow:</b>	132344		
<b>Material:</b>	Distillate Oil (No. 1 & 2)	<b>Input/Output:</b>	Process Material Used (Input)		
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>	
7439921	EPA Emission Factor	0.00125	0	0.0000	
PM10-FIL	EPA Emission Factor	1.08	0	0.0001	
PM25-FIL	EPA Emission Factor	0.83	0	0.0001	
PM-CON	EPA Emission Factor	1.3	0	0.0001	
CO	EPA Emission Factor	5	0	0.0003	
SO2	EPA Emission Factor	142	0	0	
VOC	EPA Emission Factor	0.34	0	0.0000	
NH3	EPA Emission Factor	0.8	0	0.0001	
NOX	EPA Emission Factor	24	0	0.0015	

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

Process ID: 02		Process Description: O-TYPE BLR.-NAT.GAS		
<b>SCC:</b>	10300601	<b>Stack:</b>	1	
	Commercial/Institutional	<b>Description:</b>	BOILERS # 1, 2 & 3	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	> 100 Million Btu/hr	<b>Height:</b>	191	
<b>Heat Content:</b>	1046	<b>Diameter:</b>	8	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	400	
<b>Ash Content:</b>	0	<b>Velocity:</b>	43.9	
<b>Throughput:</b>	40.104 Million Cubic Feet	<b>Gas Flow:</b>	132344	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
Pollutant	Emission Method	Emission Factor	Overall Ctrl Efficiency	Emissions(Tons)
CO	EPA Emission Factor	84	0	1.6844
NH3	EPA Emission Factor	0.49	0	0.0098
NOX	EPA Emission Factor	280	0	5.6146
PM10-FIL	EPA Emission Factor	1.9	0	0.0381
PM25-FIL	EPA Emission Factor	1.9	0	0.0381
PM-CON	EPA Emission Factor	5.7	0	0.1143
SO2	EPA Emission Factor	0.6	0	0.0120
VOC	EPA Emission Factor	5.5	0	0.1103
7439921	EPA Emission Factor	0.0005	0	0.0000

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: 004</b>		<b>Group Description:BOILER NO. 4</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 24</b>	<b>Spring: 35</b>	<b>Summer: 10</b>	<b>Fall: 31</b>	
<b>Days Per Week: 7</b>	<b>Weeks Per Year: 32</b>	<b>Hours Per Day: 24</b>	<b>Hours Per Year: 5291</b>	
<b>Process ID: 02</b>		<b>Process Description: CYCLONE-NO. 2 FUEL OIL</b>		
<b>SCC:</b>	10300501	<b>Stack:</b>	2	
	Commercial/Institutional	<b>Description:</b>	BOILER #4	
	Distillate Oil	<b>Stack Type:</b>	Vertical	
	Grades 1 and 2 Oil	<b>Height:</b>	160	
<b>Heat Content:</b>	138.18	<b>Diameter:</b>	4	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	325	
<b>Ash Content:</b>	0	<b>Velocity:</b>	126.7	
<b>Throughput:</b>	5.8 1000 Gallons	<b>Gas Flow:</b>	95500	
<b>Material:</b>	Distillate Oil (No. 1 & 2)	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
CO	EPA Emission Factor	5	0	0.0145
NH3	EPA Emission Factor	0.8	0	0.0023
NOX	EPA Emission Factor	24	0	0.0696
PM10-FIL	EPA Emission Factor	1.08	0	0.0031
PM25-FIL	EPA Emission Factor	0.83	0	0.0024
PM-CON	EPA Emission Factor	1.3	0	0.0038
SO2	EPA Emission Factor	142	0	0
VOC	EPA Emission Factor	0.34	0	0.0010
71432	EPA Emission Factor	0.00275	0	0.0000
7439921	EPA Emission Factor	0.00125	0	0.0000
7439965	EPA Emission Factor	0.00083	0	0.0000
7439976	EPA Emission Factor	0.00042	0	0.0000
7440020	EPA Emission Factor	0.00042	0	0.0000
7440382	EPA Emission Factor	0.00056	0	0.0000
7440417	EPA Emission Factor	0.00042	0	0.0000
7440439	EPA Emission Factor	0.00042	0	0.0000
7440473	EPA Emission Factor	0.00042	0	0.0000
7782492	EPA Emission Factor	0.00209	0	0.0000

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

Process ID: 03		Process Description: CYCLONE-GAS		
<b>SCC:</b>	10300601	<b>Stack:</b>	2	
	Commercial/Institutional	<b>Description:</b>	BOILER #4	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	> 100 Million Btu/hr	<b>Height:</b>	160	
<b>Heat Content:</b>	1046	<b>Diameter:</b>	4	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	325	
<b>Ash Content:</b>	0	<b>Velocity:</b>	126.7	
<b>Throughput:</b>	556.788 Million Cubic Feet	<b>Gas Flow:</b>	95500	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
Pollutant	Emission Method	Emission Factor	Overall Ctrl Efficiency	Emissions(Tons)
CO	EPA Emission Factor	84	0	23.3851
NH3	EPA Emission Factor	0.49	0	0.1364
NOX	EPA Emission Factor	280	0	77.9503
PM10-FIL	EPA Emission Factor	1.9	0	0.5289
PM25-FIL	EPA Emission Factor	1.9	0	0.5289
PM-CON	EPA Emission Factor	5.7	0	1.5868
SO2	EPA Emission Factor	0.6	0	0.1670
VOC	EPA Emission Factor	5.5	0	1.5312
7439921	EPA Emission Factor	0.0005	0	0.0001

# Facility Emission Detail

## University of Notre Dame Du Lac

**Plant ID:1814100013**

**Report for 2023**

**Location: 636 Grace Hall,Notre Dame,46556**

**NAICS: 61131 Colleges, Universities, and Professional Schools**

<b>Group ID: 005</b>		<b>Group Description:BOILER NO. 5</b>			
<b>Percent Quarterly Throughput</b>					
<b>Winter: 35</b>	<b>Spring: 0</b>	<b>Summer: 52</b>	<b>Fall: 13</b>		
<b>Days Per Week: 7</b>	<b>Weeks Per Year: 20</b>	<b>Hours Per Day: 18</b>	<b>Hours Per Year: 2331</b>		
<b>Process ID: 01</b>		<b>Process Description: A-TYPE BLR.-NO.2 DIST.OIL</b>			
<b>SCC:</b>	10300501	<b>Stack:</b>	3		
	Commercial/Institutional	<b>Description:</b>	BOILER #5		
	Distillate Oil	<b>Stack Type:</b>	Vertical		
	Grades 1 and 2 Oil	<b>Height:</b>	160		
<b>Heat Content:</b>	138.2	<b>Diameter:</b>	5		
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	344		
<b>Ash Content:</b>	0	<b>Velocity:</b>	59		
<b>Throughput:</b>	0.036 1000 Gallons	<b>Gas Flow:</b>	69500		
<b>Material:</b>	Distillate Oil (No. 1 & 2)	<b>Input/Output:</b>	Process Material Used (Input)		
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>	
PM10-FIL	EPA Emission Factor	1.08	0	0.0000	
7439921	EPA Emission Factor	0.00125	0	0.0000	
PM-CON	EPA Emission Factor	1.3	0	0.0000	
NH3	EPA Emission Factor	0.8	0	0.0000	
NOX	EPA Emission Factor	24	0	0.0004	
SO2	EPA Emission Factor	142	0	0	
PM25-FIL	EPA Emission Factor	0.83	0	0.0000	
CO	EPA Emission Factor	5	0	0.0001	
VOC	EPA Emission Factor	0.34	0	0.0000	



# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

Process ID: 02		Process Description: A-TYPE BLR.- NAT. GAS		
<b>SCC:</b>	10300601	<b>Stack:</b>	3	
	Commercial/Institutional	<b>Description:</b>	BOILER #5	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	> 100 Million Btu/hr	<b>Height:</b>	160	
<b>Heat Content:</b>	1046	<b>Diameter:</b>	5	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	344	
<b>Ash Content:</b>	0	<b>Velocity:</b>	59	
<b>Throughput:</b>	222.477 Million Cubic Feet	<b>Gas Flow:</b>	69500	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
Pollutant	Emission Method	Emission Factor	Overall Ctrl Efficiency	Emissions(Tons)
CO	EPA Emission Factor	84	0	9.3440
NH3	EPA Emission Factor	0.49	0	0.0545
NOX	EPA Emission Factor	280	0	31.1468
PM10-FIL	EPA Emission Factor	1.9	0	0.2114
PM25-FIL	EPA Emission Factor	1.9	0	0.2114
PM-CON	EPA Emission Factor	5.7	0	0.6341
SO2	EPA Emission Factor	0.6	0	0.0667
VOC	EPA Emission Factor	5.5	0	0.6118
7439921	EPA Emission Factor	0.0005	0	0.0001

# Facility Emission Detail

## University of Notre Dame Du Lac

**Plant ID:1814100013**

**Report for 2023**

**Location: 636 Grace Hall,Notre Dame,46556**

**NAICS: 61131 Colleges, Universities, and Professional Schools**

<b>Group ID: 006</b>		<b>Group Description:BOILER NO. 6</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 18</b>	<b>Spring: 12</b>	<b>Summer: 24</b>	<b>Fall: 46</b>	
<b>Days Per Week: 5</b>	<b>Weeks Per Year: 35</b>	<b>Hours Per Day: 20</b>	<b>Hours Per Year: 1375</b>	
<b>Process ID: 01</b>		<b>Process Description: S-TYPE BLR.-NO.2 DIST.OIL</b>		
<b>SCC:</b>	10300501	<b>Stack:</b>	9	
	Commercial/Institutional	<b>Description:</b>	BOILER #6	
	Distillate Oil	<b>Stack Type:</b>	Vertical	
	Grades 1 and 2 Oil	<b>Height:</b>	160	
<b>Heat Content:</b>	138.18	<b>Diameter:</b>	5	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	324	
<b>Ash Content:</b>	0	<b>Velocity:</b>	61.23	
<b>Throughput:</b>	0.44 1000 Gallons	<b>Gas Flow:</b>	72100	
<b>Material:</b>	Distillate Oil (No. 1 & 2)	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
NOX	EPA Emission Factor	24	0	0.0053
7439921	EPA Emission Factor	0.00125	0	0.0000
PM10-FIL	EPA Emission Factor	1.08	0	0.0002
SO2	EPA Emission Factor	142	0	0
VOC	EPA Emission Factor	0.34	0	0.0001
PM25-FIL	EPA Emission Factor	0.83	0	0.0002
PM-CON	EPA Emission Factor	1.3	0	0.0003
NH3	EPA Emission Factor	0.8	0	0.0002
CO	EPA Emission Factor	5	0	0.0011

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

### Location: 636 Grace Hall,Notre Dame,46556

### NAICS: 61131 Colleges, Universities, and Professional Schools

Process ID: 02		Process Description: S-TYPE BLR.- NAT. GAS		
<b>SCC:</b>	10300601	<b>Stack:</b>	9	
	Commercial/Institutional	<b>Description:</b>	BOILER #6	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	> 100 Million Btu/hr	<b>Height:</b>	160	
<b>Heat Content:</b>	1046	<b>Diameter:</b>	5	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	324	
<b>Ash Content:</b>	0	<b>Velocity:</b>	61.23	
<b>Throughput:</b>	373.5 Million Cubic Feet	<b>Gas Flow:</b>	72100	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
Pollutant	Emission Method	Emission Factor	Overall Ctrl Efficiency	Emissions(Tons)
CO	EPA Emission Factor	84	0	15.687
NH3	EPA Emission Factor	0.49	0	0.0915
NOX	EPA Emission Factor	280	0	52.29
PM10-FIL	EPA Emission Factor	1.9	0	0.3548
PM25-FIL	EPA Emission Factor	1.9	0	0.3548
PM-CON	EPA Emission Factor	5.7	0	1.0645
SO2	EPA Emission Factor	0.6	0	0.1120
VOC	EPA Emission Factor	5.5	0	1.0271
7439921	EPA Emission Factor	0.0005	0	0.0001

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: 008</b>		<b>Group Description: DIESEL-FIRED GEN. NO. 8</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 10</b>	<b>Spring: 48</b>	<b>Summer: 32</b>	<b>Fall: 10</b>	
<b>Days Per Week: 1</b>	<b>Weeks Per Year: 12</b>	<b>Hours Per Day: 2</b>	<b>Hours Per Year: 31</b>	
<b>Process ID: 01</b>		<b>Process Description: DIESEL-FIRED COMBUSTION</b>		
<b>SCC:</b>	20200102	<b>Stack:</b>	6	
	Industrial	<b>Description:</b>	GENERATOR #8	
	Distillate Oil (Diesel)	<b>Stack Type:</b>	Vertical	
	Reciprocating	<b>Height:</b>	30	
<b>Heat Content:</b>	143	<b>Diameter:</b>	1.33	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	899	
<b>Ash Content:</b>	0	<b>Velocity:</b>	187.9	
<b>Throughput:</b>	4.812 1000 Gallons	<b>Gas Flow:</b>	15664	
<b>Material:</b>	Distillate Oil (Diesel)	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
91203	EPA Emission Factor	0.012	0	0.0000
CO	EPA Emission Factor	130	0	0.3128
NOX	EPA Emission Factor	604	0	1.4532
PM10-FIL	EPA Emission Factor	42.5	0	0.1023
PM25-FIL	EPA Emission Factor	42.5	0	0.1023
SO2	EPA Emission Factor	39.7	0	0.0955
VOC	EPA Emission Factor	49.3	0	0.1186
106990	EPA Emission Factor	0.00543	0	0.0000
107028	EPA Emission Factor	0.013	0	0.0000
108883	EPA Emission Factor	0.057	0	0.0001
1330207	EPA Emission Factor	0.04	0	0.0001
71432	EPA Emission Factor	0.13	0	0.0003
7439976	EPA Emission Factor	4E-05	0	0.0000
75070	EPA Emission Factor	0.17	0	0.0004
50000	EPA Emission Factor	0.164	0	0.0004

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

### Location: 636 Grace Hall,Notre Dame,46556

### NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: 009</b>		<b>Group Description: DIESEL-FIRED GEN. NO. 9</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 18</b>		<b>Spring: 23</b>		<b>Summer: 53</b>
				<b>Fall: 6</b>
<b>Days Per Week: 1</b>		<b>Weeks Per Year: 18</b>		<b>Hours Per Day: 5</b>
				<b>Hours Per Year: 103</b>
<b>Process ID: 01</b>		<b>Process Description: DIESEL-FIRED GENERATOR</b>		
<b>SCC:</b>	20200102	<b>Stack:</b>	7	
	Industrial	<b>Description:</b>	GENERATOR #9	
	Distillate Oil (Diesel)	<b>Stack Type:</b>	Vertical	
	Reciprocating	<b>Height:</b>	30	
<b>Heat Content:</b>	140	<b>Diameter:</b>	1.33	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	899	
<b>Ash Content:</b>	0	<b>Velocity:</b>	187.9	
<b>Throughput:</b>	9.766 1000 Gallons	<b>Gas Flow:</b>	15664	
<b>Material:</b>	Distillate Oil (Diesel)	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
91203	EPA Emission Factor	0.012	0	0.0001
CO	EPA Emission Factor	130	0	0.6348
NOX	EPA Emission Factor	604	0	2.9493
PM10-FIL	EPA Emission Factor	42.5	0	0.2075
PM25-FIL	EPA Emission Factor	42.5	0	0.2075
SO2	EPA Emission Factor	39.7	0	0.1939
VOC	EPA Emission Factor	49.3	0	0.2407
106990	EPA Emission Factor	0.00543	0	0.0000
107028	EPA Emission Factor	0.013	0	0.0001
108883	EPA Emission Factor	0.057	0	0.0003
1330207	EPA Emission Factor	0.04	0	0.0002
71432	EPA Emission Factor	0.13	0	0.0006
7439976	State/Local Emission Factor	0	0	0
75070	EPA Emission Factor	0.17	0	0.0008
50000	EPA Emission Factor	0.164	0	0.0008

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: 010</b>		<b>Group Description: DIESEL-FIRED GEN. NO. 10</b>			
<b>Percent Quarterly Throughput</b>					
<b>Winter: 14</b>		<b>Spring: 26</b>		<b>Summer: 53</b>	
<b>Fall: 7</b>					
<b>Days Per Week: 1</b>		<b>Weeks Per Year: 14</b>		<b>Hours Per Day: 5</b>	
		<b>Hours Per Year: 89</b>			
<b>Process ID: 01</b>		<b>Process Description: DIESEL-FIRED COMBUSTION</b>			
<b>SCC:</b>	20200102	<b>Stack:</b>	8		
	Industrial	<b>Description:</b>	GENERATOR #10		
	Distillate Oil (Diesel)	<b>Stack Type:</b>	Vertical		
	Reciprocating	<b>Height:</b>	30		
<b>Heat Content:</b>	143	<b>Diameter:</b>	1.33		
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	899		
<b>Ash Content:</b>	0	<b>Velocity:</b>	187.9		
<b>Throughput:</b>	0.784 1000 Gallons	<b>Gas Flow:</b>	15664		
<b>Material:</b>	Distillate Oil (Diesel)	<b>Input/Output:</b>	Process Material Used (Input)		
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>	
91203	EPA Emission Factor	0.012	0	0.0000	
CO	EPA Emission Factor	130	0	0.0510	
NOX	EPA Emission Factor	604	0	0.2368	
PM10-FIL	EPA Emission Factor	42.5	0	0.0167	
PM25-FIL	EPA Emission Factor	42.5	0	0.0167	
SO2	EPA Emission Factor	39.7	0	0.0156	
VOC	EPA Emission Factor	49.3	0	0.0193	
106990	EPA Emission Factor	0.00543	0	0.0000	
107028	EPA Emission Factor	0.013	0	0.0000	
108883	EPA Emission Factor	0.057	0	0.0000	
1330207	EPA Emission Factor	0.04	0	0.0000	
71432	EPA Emission Factor	0.13	0	0.0001	
7439976	State/Local Emission Factor	0	0	0	
75070	EPA Emission Factor	0.17	0	0.0001	
50000	EPA Emission Factor	0.164	0	0.0001	

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: 011</b>		<b>Group Description: DIESEL-FIRED GEN. NO. 3</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 0</b>	<b>Spring: 0</b>	<b>Summer: 0</b>	<b>Fall: 100</b>	
<b>Days Per Week: 1</b>	<b>Weeks Per Year: 1</b>	<b>Hours Per Day: 1</b>	<b>Hours Per Year: 1</b>	
<b>Process ID: 01</b>		<b>Process Description: DIESEL-FIRED COMBUSTION</b>		
<b>SCC:</b>	20200102	<b>Stack:</b>	4	
	Industrial	<b>Description:</b>	GENERATOR #3	
	Distillate Oil (Diesel)	<b>Stack Type:</b>	Vertical	
	Reciprocating	<b>Height:</b>	38	
<b>Heat Content:</b>	139	<b>Diameter:</b>	1.25	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	200	
<b>Ash Content:</b>	0	<b>Velocity:</b>	81.5	
<b>Throughput:</b>	0 1000 Gallons	<b>Gas Flow:</b>	6000	
<b>Material:</b>	Distillate Oil (Diesel)	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
91203	EPA Emission Factor	0.012	0	0
CO	EPA Emission Factor	130	0	0
NOX	EPA Emission Factor	604	0	0
PM10-FIL	EPA Emission Factor	42.5	0	0
PM25-FIL	EPA Emission Factor	42.5	0	0
SO2	EPA Emission Factor	39.7	0	0
VOC	EPA Emission Factor	49.3	0	0
106990	EPA Emission Factor	0.00543	0	0
107028	EPA Emission Factor	0.013	0	0
108883	EPA Emission Factor	0.057	0	0
1330207	EPA Emission Factor	0.04	0	0
71432	EPA Emission Factor	0.13	0	0
7439976	EPA Emission Factor	4E-05	0	0
75070	EPA Emission Factor	0.17	0	0
50000	EPA Emission Factor	0.164	0	0

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: GT-1</b>		<b>Group Description: Turbine 1</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 33</b>	<b>Spring: 19</b>	<b>Summer: 25</b>	<b>Fall: 23</b>	
<b>Days Per Week: 5</b>	<b>Weeks Per Year: 52</b>	<b>Hours Per Day: 12</b>	<b>Hours Per Year: 2999</b>	
<b>Process ID: 1</b>		<b>Process Description: Natural Gas</b>		
<b>SCC:</b>	20100201	<b>Stack:</b>	10	
	Electric Generation	<b>Description:</b>	Turbine Stack	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	Turbine	<b>Height:</b>	148	
<b>Heat Content:</b>	1047	<b>Diameter:</b>	7	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	270	
<b>Ash Content:</b>	0	<b>Velocity:</b>	50	
<b>Throughput:</b>	303.9 Million Cubic Feet	<b>Gas Flow:</b>	115454	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
PM10-FIL	EPA Emission Factor	1.9	0	0.2887
PM25-FIL	EPA Emission Factor	1.9	0	0.2887
PM-CON	EPA Emission Factor	4.8	0	0.7294
SO2	EPA Emission Factor	0.6	0	0.0912
VOC	EPA Emission Factor	2.1	0	0.3191



# Facility Emission Detail

University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: GT-2</b>		<b>Group Description: Turbine 2</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 25</b>		<b>Spring: 16</b>		<b>Summer: 22</b>
				<b>Fall: 37</b>
<b>Days Per Week: 5</b>		<b>Weeks Per Year: 36</b>		<b>Hours Per Day: 4</b>
				<b>Hours Per Year: 905</b>
<b>Process ID: 1</b>		<b>Process Description: Natural Gas</b>		
<b>SCC:</b>	20100201	<b>Stack:</b>	10	
	Electric Generation	<b>Description:</b>	Turbine Stack	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	Turbine	<b>Height:</b>	148	
<b>Heat Content:</b>	1046	<b>Diameter:</b>	7	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	270	
<b>Ash Content:</b>	0	<b>Velocity:</b>	50	
<b>Throughput:</b>	220.164 Million Cubic Feet	<b>Gas Flow:</b>	115454	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
PM10-FIL	EPA Emission Factor	1.9	0	0.2092
PM25-FIL	EPA Emission Factor	1.9	0	0.2092
PM-CON	EPA Emission Factor	4.8	0	0.5284
SO2	EPA Emission Factor	0.6	0	0.0660
VOC	EPA Emission Factor	2.1	0	0.2312

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID: HRSG 1</b>		<b>Group Description: Turbine 1 HRSG</b>		
<b>Percent Quarterly Throughput</b>				
<b>Winter: 33</b>	<b>Spring: 19</b>	<b>Summer: 25</b>	<b>Fall: 23</b>	
<b>Days Per Week: 5</b>	<b>Weeks Per Year: 52</b>	<b>Hours Per Day: 12</b>	<b>Hours Per Year: 2999</b>	
<b>Process ID: 01</b>		<b>Process Description: Natural Gas</b>		
<b>SCC:</b>	10100602	<b>Stack:</b>	10	
	Electric Generation	<b>Description:</b>	Turbine Stack	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	Boilers < 100 Million Btu/hr except Tangential	<b>Height:</b>	148	
<b>Heat Content:</b>	1047	<b>Diameter:</b>	7	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	270	
<b>Ash Content:</b>	0	<b>Velocity:</b>	50	
<b>Throughput:</b>	214.698 Million Cubic Feet	<b>Gas Flow:</b>	115454	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
CO	EPA Emission Factor	84	0	9.0173
NH3	EPA Emission Factor	3.2	0	0.3435
NOX	EPA Emission Factor	100	0	10.7349
PM10-FIL	EPA Emission Factor	1.9	0	0.2040
PM25-FIL	EPA Emission Factor	1.9	0	0.2040
PM-CON	EPA Emission Factor	5.7	0	0.6119
SO2	EPA Emission Factor	0.6	0	0.0644
VOC	EPA Emission Factor	5.5	0	0.5904
7439921	EPA Emission Factor	0.0005	0	0.0001

# Facility Emission Detail

## University of Notre Dame Du Lac

Plant ID:1814100013

Report for 2023

Location: 636 Grace Hall,Notre Dame,46556

NAICS: 61131 Colleges, Universities, and Professional Schools

<b>Group ID:</b> HRSG 2		<b>Group Description:</b> Turbine 2 HRSG		
<b>Percent Quarterly Throughput</b>				
<b>Winter:</b> 25		<b>Spring:</b> 16		<b>Summer:</b> 22
				<b>Fall:</b> 37
<b>Days Per Week:</b> 5		<b>Weeks Per Year:</b> 36		<b>Hours Per Day:</b> 4
				<b>Hours Per Year:</b> 905
<b>Process ID:</b> 01		<b>Process Description:</b> Natural Gas		
<b>SCC:</b>	10100602	<b>Stack:</b>	10	
	Electric Generation	<b>Description:</b>	Turbine Stack	
	Natural Gas	<b>Stack Type:</b>	Vertical	
	Boilers < 100 Million Btu/hr except Tangential	<b>Height:</b>	148	
<b>Heat Content:</b>	1047	<b>Diameter:</b>	7	
<b>Sulfur Content:</b>	0	<b>Temperature:</b>	270	
<b>Ash Content:</b>	0	<b>Velocity:</b>	50	
<b>Throughput:</b>	164.073 Million Cubic Feet	<b>Gas Flow:</b>	115454	
<b>Material:</b>	Natural Gas	<b>Input/Output:</b>	Process Material Used (Input)	
<b>Pollutant</b>	<b>Emission Method</b>	<b>Emission Factor</b>	<b>Overall Ctrl Efficiency</b>	<b>Emissions(Tons)</b>
CO	EPA Emission Factor	84	0	6.8911
NH3	EPA Emission Factor	3.2	0	0.2625
NOX	EPA Emission Factor	100	0	8.2036
PM10-FIL	EPA Emission Factor	1.9	0	0.1559
PM25-FIL	EPA Emission Factor	1.9	0	0.1559
PM-CON	EPA Emission Factor	5.7	0	0.4676
SO2	EPA Emission Factor	0.6	0	0.0492
VOC	EPA Emission Factor	5.5	0	0.4512
7439921	EPA Emission Factor	0.0005	0	0.0000