



Missouri Department of dnr.mo.gov

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

September 10, 2020

Richard Behrens  
Plant Manager  
Vicinity Energy  
115 Grand Blvd.  
Kansas City, MO 64106

RE: Part 70 Operating Permit Significant Modification - Permit Number OP2018-006A  
Project Number: 2020-03-005; Installation Number: 095-0021

Dear Richard Behrens

Your Part 70 Operating Permit OP2018-006 is being modified in response to your March 13, 2020 request. Your request is to change the installation name from Veolia Energy to Vicinity Energy and incorporate a voluntary plant wide hazardous air pollutants (HAPs) limitations to establish area source status. As an area source, the installation is no longer subject to the provisions of 40 CFR Part 63 Subpart DDDDD *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*. This modification establishes the requested voluntary emission limitations and removes 40 CFR Part 63 Subpart DDDDD from the operating permit. Additionally, upon review it was discovered applicability changes to 10 CSR 10-6.220 *Restriction of Emission of Visible Air Contaminants*, and 10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions* are necessary to incorporate into the proposed permit. These regulations will appear in the operating permit as Permit Condition 005 and Permit Condition 006, respectively. Please replace the current pages 4, 7, 8, and the Statement of Basis with revised pages 4A, 7A, 8A, and the revised Statement of Basis and add pages 11A through 13A and 23 through 28 to operating permit OP2018-006.

This permit modification may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by



Richard Behrens  
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registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you have any questions regarding this modification, please do not hesitate to contact Joseph Miller, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-8427. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in blue ink that reads "Kendall B. Hale". The signature is written in a cursive style.

Kendall B. Hale  
Permits Section Chief

KBH:jmj

Enclosures

c: Kansas City Regional Office  
PAMS File: 2020-03-005

# PART 70

## PERMIT TO OPERATE

**Operating Permit Number:** OP2018-006A  
**Installation Name:** Vicinity Energy  
**Installation ID:** 095-0021  
**Project Number:** 2020-03-005

### **Description of Part 70 Significant Modification:**

This modification consists of changing the installation name from Veolia Energy to Vicinity Energy, establishing the requested voluntary Hazardous Air Pollutants (HAPs) emission limitations, and removing 40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters from the operating permit. The emission units located at this installation are boilers and two cold cleaners. The emission units at the installation that emit Hazardous Air Pollutants and require additional monitoring and record keeping to comply with the voluntary emission limitation are boiler 1A (EP-01), boilers 6 and 8 (EP-02), and boiler 7 (EP-03). As part of this project, the SDS for the cold cleaners were reviewed and determined to not contain any HAPs.

On January 25, 2018, the US EPA published a memorandum titled “Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act”. This guidance memorandum addresses the question of when a major source subject to a MACT standard may be reclassified as an area source. This memorandum supersedes the previous guidance, titled “Potential to Emit for MACT Standards-Guidance on Timing Issues”, which established the policy of Once In, Always In. The 2018 memo clarifies that when an installation obtains an enforceable limit on HAP emissions to become an area source, regardless of when the limit is taken, the source is not subject to major source regulations under CAA 112, so long as the source’s potential emissions remains below the major source thresholds for HAP emissions.

This memo directly affects the applicability of the following regulations for this installation:

40 CFR Part 63 Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*. This rule is applicable to installations that are major sources of HAPs. The requested voluntary limitations will reclassify this installation as an Area Source, limiting total HAPs emissions to less than 25.0 tons and individual HAPs emissions to less than 10.0 tons per consecutive twelve month period. Therefore, the installation is not subject to the provisions of this rule, due to the rescission of the Once In, Always In policy.

40 CFR Part 63 Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*. This rule is applicable to installations that are Area Sources for HAPs. The requested voluntary limitations will reclassify this installation as an Area Source, limiting total HAPs emissions to less than 25.0 tons and individual HAPs emissions to less than 10.0 tons per consecutive twelve month period. The installation is not subject to this regulation because all of the installation’s boilers are gas-fired boilers, which are exempt per §63.11195(e).

## II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The plant wide conditions apply to all emission units at this installation. All emission units are listed in Section I under Emission Units with Limitations and Emission Units without Limitations.

### PERMIT CONDITION PW001

10 CSR 10-6.065 Operating Permits, Voluntary Limitation(s)

#### **Emission Limitations:**

The permittee shall emit less than 10.0 tons individually and 25.0 tons combined Hazardous Air Pollutants (HAPs) in any consecutive 12 month period from the entire installation.

**Table 1 – Hazardous Air Pollutants Emission Limitations**

Pollutant	Emission Limitation (tons)
Individual HAPs	10.0
Combined HAPs	25.0

#### **Monitoring/Recordkeeping:**

- 1) The permittee shall monitor and record the plant wide individual and combined HAPs emissions on a monthly and consecutive 12 month basis. The permittee shall use Attachment B: Plant Wide Combined HAPs Tracking Record and Attachment C: Plant Wide Individual HAPs Tracking Record, or equivalents, to demonstrate compliance.
- 2) The permittee shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request. These records shall include SDS for all materials used.

#### **Reporting:**

- 1) The permittee shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov), and to the Kansas City Air Quality Program, 2400 Troost Avenue, Suite 3000, Kansas City, MO 64108, no later than ten days after the end of the month during which any record required by this permit shows an exceedance of an emission limitation imposed by this permit.
- 2) Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit condition shall be submitted in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

**PERMIT CONDITION 003**

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations  
40 CFR 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for  
Industrial, Commercial, and Institutional Boilers and Process Heaters

Operating Permit amendment OP2018-006A removes Permit Condition 003 from this operating permit. This page is included as a placeholder.

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**PERMIT CONDITION 005**

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants<sup>1</sup>

**EP1 through EP3 – Boiler 1A through Boiler 7**

Emission Unit	Description	Manufacturer/Model # (Year Installed)
EP1	Boiler 1A (300 MM Btu/hr capacity) [Natural gas fired]	Babcock & Wilcox / Cyclopak (1969)
EP2	Boiler 6 (483.7 MM Btu/hr capacity) [Natural gas fired]	Combustion Engineering (1944)
EP2	Boiler 8 (507.6 MM Btu/hr capacity) [Natural gas fired]	Combustion Engineering (1948)
EP3	Boiler 7 (517 MM Btu/hr capacity) [Natural gas fired]	Combustion Engineering (1950)

**Emission Limitation:**

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from these emission units any visible emissions with an opacity greater than 20 percent for any continuous six-minute period. [10 CSR 10-6.220(3)(A)1]
- 2) Exception: The permittee may discharge into the atmosphere from any emission unit visible emissions with an opacity up to 60 percent for one continuous six-minute period in any 60 minutes. [10 CSR 10-6.220(3)(A)2]
- 3) Failure to demonstrate compliance with 10 CSR 10-6.220(3)(A) solely because of the presences of uncombined water shall not be a violation. [10 CSR 10-6.220(3)(B)]

**Monitoring:**

- 1) Monitoring schedule:
  - a) The permittee shall conduct weekly observations for a minimum of eight consecutive weeks after permit issuance. Should no violation of this regulation be observed during this period then:
    - i) The permittee shall conduct observations once every two weeks for a period of eight weeks. If a violation is noted, the permittee shall revert to weekly monitoring. Should no violation of this regulation be observed during this period then:
      - (1) The permittee shall conduct observations once per month. If a violation is noted, the permittee shall revert to weekly monitoring.
- 2) If the permittee reverts to weekly monitoring at any time, the monitoring schedule shall progress in an identical manner from the initial monitoring schedule.
- 3) Observations are only required when the emission units are operating and when the weather conditions allow.
- 4) The permittee shall conduct visible emissions observation on these emission units using the procedures contained in U.S. EPA Test Method 22. Each Method 22 observation shall be conducted for a minimum of

<sup>1</sup> Permit Condition 005 contains only federal requirements from 10 CSR 10-6.220 as reflected in Missouri's State Implementation Plan (SIP) for natural gas combustion units. These units are exempt from this regulation in the Missouri Code of State Regulations (CSR) due to revisions in the CSR that have not been incorporated into the SIP. Once the revised version of this regulation is incorporated into the SIP, Permit Condition 005 shall no longer apply. An operating permit modification is not required for this change.

six-minutes. If no visible emissions are observed from the emission unit using Method 22, then no Method 9 is required for the emission unit.

- 5) For emission units with visible emissions, the permittee shall have a certified Method 9 observer conduct a U.S. EPA Test Method 9 opacity observation. The permittee may choose to forego Method 22 observations and instead begin with a Method 9 opacity observation. The certified Method 9 observer shall conduct each Method 9 opacity observation for a minimum of 30-minutes.

**Recordkeeping:**

- 1) The permittee shall maintain records of all observation results for each emission unit using Attachment E and Attachment F, or equivalents, to demonstrate compliance.
- 2) The permittee shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

- 1) The permittee shall report any exceedance of the limitations no later than ten (10) days after an exceedance of the emission limitation.
- 2) The permittee shall report any deviations from the monitoring, recordkeeping, and reporting requirements of this permit condition in the semi-annual and annual compliance certification reports required by Section V of this permit.
- 3) All reports and certifications shall be submitted to the Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).



**PERMIT CONDITION 006**

10 CSR 10-6.261 Control of Sulfur Dioxide Emissions<sup>2</sup>

**EP1 through EP3 – Boiler 1A through Boiler 7**

Emission Unit	Description	Manufacturer/Model # (Year Installed)
EP1	Boiler 1A (300 MM Btu/hr capacity) [Natural gas fired]	Babcock & Wilcox / Cyclopak (1969)
EP2	Boiler 6 (483.7 MM Btu/hr capacity) [Natural gas fired]	Combustion Engineering (1944)
EP2	Boiler 8 (507.6 MM Btu/hr capacity) [Natural gas fired]	Combustion Engineering (1948)
EP3	Boiler 7 (517 MM Btu/hr capacity) [Natural gas fired]	Combustion Engineering (1950)

**Operational Limitation:**

The permittee shall combust natural gas that meets the definition of 40 CFR 72.2. No other fuels shall be combusted in these units. [6.261(1)(A)]

**Monitoring/Recordkeeping:**

- 1) The permittee shall determine compliance using fuel delivery records. [6.261(3)(E)3.]
- 2) The permittee must maintain a record of fuel deliveries. [6.261(4)(A)3.]
- 3) The permittee must maintain the fuel supplier information to certify all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing the following information for all fuel purchases or deliveries are deemed acceptable to comply with the requirements of this rule: [6.261(4)(C)]
  - a) The name, address, and contact information of the fuel supplier; [6.261(4)(C)(1)]
  - b) The type of fuel; [6.261(4)(C)(2)]
  - c) The sulfur content or maximum sulfur content expressed in percent sulfur by weight or in ppm sulfur; and [6.261(4)(C)(4)]
  - d) The heating value of the fuel. [6.261(4)(C)(5)]
- 4) The permittee must furnish the Director all data necessary to determine compliance status. [6.261(4)(G)]
- 5) The permittee shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

**Reporting:**

- 1) The permittee shall report any exceedance of the limitations no later than ten (10) days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.
- 2) The permittee shall report any deviations from the monitoring, recordkeeping, and reporting requirements of this permit condition in the semi-annual monitoring and annual compliance certification reports required by Section V of this permit.
- 3) All reports and certifications shall be submitted to the Air Pollution Control Program's Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 or [AirComplianceReporting@dnr.mo.gov](mailto:AirComplianceReporting@dnr.mo.gov).

<sup>2</sup> This permit condition contains the applicable requirements from 10 CSR 10-6.261 as reflected in Missouri's Code of State Regulations (CSR). This permit condition is a state requirement until this regulation is incorporated into the SIP. Once the SIP is updated, this permit condition will be both a state and federal requirement. A permit modification is not required for this change.

**Attachment B**  
 Plant Wide Combined HAPs Tracking Record

This sheet covers the month of \_\_\_\_\_ in the year \_\_\_\_\_.

<b>Emission Point</b>	<b>Description</b>	<b>Monthly Throughput (MMscf)</b>	<b>Combined HAP Emission Factor (lb/MMscf)<sup>3</sup></b>	<b>Monthly Combined HAP Emissions (tons)<sup>4</sup></b>
<b>SSM Emissions for this Month (tons)<sup>5</sup>:</b>				
<b>Total Monthly Combined HAP Emissions (tons)<sup>6</sup>:</b>				
<b>12-Month Rolling Total Combined HAP Emissions (tons)<sup>7</sup>:</b>				

<sup>3</sup>The permittee shall use the Combined HAPs emission factor presented in Attachment D.

<sup>4</sup>Monthly Combined HAP Emissions Calculation: [Monthly Throughput, MMscf] × [Combined HAP Emission Factor, lbs/MMscf] × [1 ton/2,000 lbs.] = [Monthly Combined HAP Emissions, tons]

<sup>5</sup>Start-up, shutdown, and malfunction (SSM) emissions as reported to the Air Pollution Control Program’s Compliance/Enforcement Section during the current month must be included in the Total Monthly HAPs Emissions.

<sup>6</sup>Monthly Combined HAP Emissions (tons) = the sum of each emission sources Monthly Combined HAP Emissions (tons) and the SSM emissions for the current month (tons).

<sup>7</sup> 12-Month Rolling Total Combined HAP Emissions = the sum of the 12 most recent Monthly Combined HAP Emissions. 12-Month Rolling Total Combined HAP Emissions of less than 25.0 tons indicates compliance with Permit Condition PW001.



**Attachment D**

Table of Hazardous Air Pollutant Emission Factors from Natural Gas Combustion<sup>12</sup>

Hazardous Air Pollutant	CAS No.	Emission Factor (lb./MMscf)
POM Aggregate Group <sup>13</sup>	-	6.98E-04
POM Acenaphthene	83-32-9	1.80E-06
POM Acenaphthylene	203-96-8	1.80E-06
POM Anthracene	120-12-7	2.40E-06
POM Benzo(a)Anthracene	56-55-3	1.80E-06
POM Benzo(a)Pyrene	50-32-8	1.20E-06
POM Benzo(b)Fluoranthene	205-99-2	1.80E-06
POM Benzo(g,h,i)Perylene	191-24-2	1.20E-06
POM Benzo(k)Fluoranthene	207-08-9	1.80E-06
POM Chrysene	218-01-9	1.80E-06
POM Dibenz(a,h)Anthracene	53-70-3	1.20E-06
POM 7,12-Dimethylbenz[a]Anthracene	57-97-6	1.60E-05
POM Fluoranthene	206-44-0	3.00E-06
POM Fluorene	86-73-7	2.80E-06
POM Indeno(1,2,3-c,d)Pyrene	193-39-5	1.80E-06
POM 2-Methylnaphthalene	91-57-6	2.40E-05
POM 3-Methylcholanthrene	56-49-5	1.80E-06
POM Naphthalene	91-20-3	6.10E-04
POM Phenanthrene	85-01-8	1.70E-05
POM Pyrene	129-00-0	5.00E-06
Arsenic compounds	7440-38-2	2.00E-04
Benzene	71-43-2	2.10E-03
Beryllium compounds	7440-41-7	1.20E-05
Cadmium compounds	7440-43-9	1.10E-03
Chromium compounds	7440-47-3	1.40E-03
Cobalt compounds	7440-48-4	8.40E-05
1,4-Dichlorobenzene(p)	106-46-7	1.20E-03
Formaldehyde	50-00-0	7.50E-02
Hexane	110-54-3	1.80E+00
Lead compounds	7439-92-1	5.00E-04
Manganese compounds	7439-96-5	3.80E-04
Mercury compounds	7439-97-6	2.60E-04
Nickel compounds	7440-02-0	2.10E-03
Selenium compounds	7782-49-2	2.40E-05
Toluene	108-88-3	3.40E-03
<b>Combined HAPs<sup>14</sup></b>	<b>-</b>	<b>1.888458</b>

<sup>12</sup> Emission Factors sourced from Tables 1.4-2, 1.4-3 and Table 1.4-4 from AP-42 Chapter 1.4.

<sup>13</sup> To comply with Permit Condition PW001, the installation must emit less than 10.0 tons per year for the individual POM compounds and less than 10.0 tons per year for the grouping of POM compounds.

<sup>14</sup> Combined HAPs are equal to sum of the emission factors for all of the listed HAPs.



**Attachment F**

Method 9 Opacity Observations		
Installation Name:	Sketch of the observer's position relative to the emission unit	
Emission Point:		
Emission Unit:		
Observer Name and Affiliation:		
Observer Certification Date:		
Method 9 Observation Date:		
Height of Emission Point:		
Time:	Start of observations	End of observations
Distance of Observer from Emission Point:		
Observer Direction from Emission Point:		
Approximate Wind Direction:		
Estimated Wind Speed:		
Ambient Temperature:		
Description of Sky Conditions (Presence and color of clouds):		
Plume Color:		
Approximate Distance Plume is Visible from Emission Point:		

**Attachment F (continued) Method 9 Opacity Observations**

Minute	Seconds				1-minute Avg. % Opacity <sup>15</sup>	6-minute Avg. % Opacity <sup>16</sup>	Steam Plume (check if applicable)		Comments
	0	15	30	45			Attached	Detached	
	Opacity Readings (% Opacity) <sup>17</sup>								
0						N/A			
1						N/A			
2						N/A			
3						N/A			
4						N/A			
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The emission unit is in compliance if each six-minute average opacity is less than or equal to 20 %. Exception: The emission unit is in compliance if one six-minute average opacity is greater than 20 %, but less than 60 %.

Was the emission unit in compliance at the time of evaluation (yes or no)?

\_\_\_\_\_  
 Signature of Observer

15 1-minute avg. % opacity is the average of the four 15 second opacity readings during the minute.

16 6-minute avg. % opacity is the average of the six most recent 1-minute avg. % opacities.

17 Each 15 second opacity reading shall be recorded to the nearest 5% opacity as stated within Method 9.

## STATEMENT OF BASIS

### Installation Description

Vicinity Energy – Kansas City operates a district heating and cooling system that provides steam, hot water, and/or chilled water to industrial, commercial, governmental and residential facilities in the downtown Kansas City area. The installation operates four boilers that provide steam for process heating, comfort heating, or hot water. Installation boilers can supply steam to a five (5) megawatt back pressure turbine generator owned and operated by Veolia Energy. Installation boilers can also supply steam to three steam-driven, water-cooled refrigeration units that are owned and operated by Veolia Energy.

All four of the installation's boilers run only on natural gas. Other sources of emissions include two solvent parts washers. The installation is a major source of nitrogen oxides (NO<sub>x</sub>), and carbon monoxide (CO) emissions.

This installation is on the list of named sources so fugitive emissions are included in the Potential to Emit (PTE) calculations. This installation's boilers previously combusted coal but ceased doing so in 2015 for Boilers 1A, 6, and 8 as well as in 2016 for Boiler 7. Therefore, the coal storage piles, coal screening, milling and transfer operations, fly ash loading, storage and transfer emission units have been removed from this permit. This explains why PM, SO<sub>x</sub>, NO<sub>x</sub> and HAP emissions exceed the current potential-to-emit.

Emission rates from the last 5 years and the potential emissions are shown in Table 2 on the following page. All potential emission rates are also within the same table and are based upon construction permit 122016-009 and voluntary limits. Calculations for 122016-009 took worst case scenarios for each criteria pollutant based upon fuel oil or natural gas combustion for EP3 (Boiler 7). A new voluntary limitation via Permit Condition 001 limits the installation to only combust natural gas with EP3 therefore PTE values have decreased to reflect the new limitation. Emission Factors were obtained from AP 42 Chapter 1.4 (Table 1.4-1 for CO and NO<sub>x</sub>, Table 1.4-3 for HAPs, and Table 1.4-2 for remaining criteria pollutants).

In the spring of 2020, a permit modification established the requested voluntary Hazardous Air Pollutants (HAPs) emission limitations and changed the installations name from Veolia Energy – Kansas City to Vicinity Energy – Kansas City. The emission units at the installation that emit Hazardous Air Pollutants and require additional monitoring and record keeping to comply with the voluntary emission limitation are boiler 1A (EP-01), boilers 6 and 8 (EP-02), and boiler 7 (EP-03).



Installation ID: **Error! Unknown document property****name.**Project No. **Error! Unknown document property****name.****Table 2 - Emissions Summary, tons per year**

Pollutants	2016	2015	2014	2013	2012	Potential to Emit <sup>1</sup>
Particulate Matter ≤ Ten Microns (PM <sub>10</sub> )	11.96	389.63	411.79	419.50	354.74	52.61
Particulate Matter ≤ 2.5 Microns (PM <sub>2.5</sub> )	11.94	385.44	407.36	414.98	350.92	52.61
Sulfur Oxides (SO <sub>x</sub> )	24.86	7342.77	7782.32	7934.14	6702.23	4.15
Nitrogen Oxides (NO <sub>x</sub> )	236.27	1314.05	1366.64	1386.03	1179.10	1176.75
Volatile Organic Compounds (VOC)	7.55	4.26	3.67	3.51	3.23	38.07
Carbon Monoxide (CO)	33.06	48.60	40.99	39.53	34.83	166.13
Lead (Pb)	0.00	0.00	0.00	0.00	0.02	0.00
Hazardous Air Pollutants (HAPs)	2.13	74.81	74.81	74.81	74.81	< 25
Individual Hazardous Air Pollutants (HAPs)	-	-	-	-	-	< 10

<sup>1</sup>Each emission unit was evaluated at 8,760 hours of uncontrolled annual operation unless otherwise noted.

### Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Part 70 Operating Permit Application, received August 10, 2017; revised September 5, 2017;
- 2) 2016 Emissions Inventory Questionnaire, received March 29, 2017;
- 3) U.S. EPA's Factor Information Retrieval (FIRE) Date System 6.25;
- 4) Construction Permit 112016-009, Issued December 21, 2016;
- 5) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

### Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

#### 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*

This rule applies to all sources of visible emissions throughout the state of Missouri. There are two versions of this regulation that are in effect: the Missouri's State Implementation Plan (SIP) version and the Code of State Regulations (CSR) version. The differences are due to revisions to the CSR that have not been incorporated into the SIP. As it applies to this installation, the CSR version of 6.220 has an exemption for emission units fueled exclusively by natural gas while the SIP version does not include this exemption. This permit contains a permit condition to reflect the SIP version of this regulation. Permit Condition 005 contains the natural gas fired units, which are subject to the SIP version only.

Installation ID: **Error! Unknown document property****name.**Project No. **Error! Unknown document property****name.**

When the CSR version is incorporated into the SIP, Permit Condition 005 will no longer apply. The emission units at the installation that are potential sources of visible emissions are included in Table 3 below. The natural gas-fired emission units in Table 3 are exempt from the CSR version of 6.220 per (1)(L).

**Table 3 – Applicability Determination for Missouri’s SIP and CSR for 10 CSR 10-6.220**

<b>Emission Unit</b>	<b>Description</b>	<b>CSR</b>	<b>SIP</b>
EP-05	Boiler 1A (300 MM Btu/hr capacity) [Natural gas fired]		X
EP-06	Boiler 6 (483.7 MM Btu/hr capacity) [Natural gas fired]		X
EP-08	Boiler 8 (507.6 MM Btu/hr capacity) [Natural gas fired]		X
EP-09	Boiler 7 (517 MM Btu/hr capacity) [Natural gas fired]		X

“X” indicates the emission unit is subject to the provisions of the specified version of 6.220.

#### 10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions*

This rule applies to any source that emits sulfur dioxide (SO<sub>2</sub>). Table 4 shows the emission units subject to this rule. An exception applies to all emission units at the installation subject to this regulation per 6.261(1)(A) since all units are fueled exclusively by natural gas. This exception requires reporting and record keeping according to the requirements in 10 CSR 10-6.261(4). These requirements appear as Permit Condition 006 in the operating permit.

**Table 4 – Emission Units Subject to 10 CSR 10-6.261**

<b>Emission Unit</b>	<b>Description</b>	<b>Fuel Type</b>	<b>MHDR</b>
EP-05	Boiler 1A	Natural Gas	300 MMBtu/hr
EP-06	Boiler 6	Natural Gas	483.7 MMBtu/hr
EP-08	Boiler 8	Natural Gas	507.6 MMBtu/hr
EP-09	Boiler 7	Natural Gas	517 MMBtu/hr

#### **Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated:

#### 10 CSR 10-6.100, *Alternate Emission Limits*

This rule is not applicable because the installation is in an ozone attainment area.

#### **Construction Permit History**

The following revisions were made to construction permits for this installation:

Construction Permit 122016-009 indicates that the installation shall exclusively combust natural gas for Boilers 1A, 6, and 8 as well as all boilers had ceased combustion of coal in 2015. Thus, the SO<sub>x</sub> limitation in the previous version of this permit, completed on March 4<sup>th</sup>, 2013, within the plant wide limitations has been omitted. Specifically, the limit, which derived from Construction Permit Kansas City Air Quality Program #541, Issued February 1, 1990 and Amended January 26, 1998, prevented the installation from discharging more than 14,467 tons of sulfur oxides pollutants (SO<sub>x</sub>) into the atmosphere from the entire installation during any consecutive 12-month period. This limitation was

based on the combustion of coal and consequently the value listed is much higher than the current potential to emit value of 4.15 tons per 12-month period for SO<sub>x</sub>.

### **New Source Performance Standards (NSPS) Applicability**

Subpart D - *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*

This rule is applicable to fossil-fuel-fired steam generating units of more than 250 million British thermal units per hour (MMBtu/hr) heat input rate which commenced construction or modification after August 17, 1971. Changes to an existing fossil-fuel-fired steam generating unit to accommodate the use of combustible materials, other than fossil fuels as defined in this subpart, shall not bring that unit under the applicability of this subpart. This rule was determined not to be applicable to Boilers 1, 6, 7 or 8, although each is a fossil-fueled boiler with a rated capacity of greater than 250 MM Btu/hr. These units were each constructed prior to 1971 and have not been reconstructed or modified since installation so as to become subject to the rule.

40 CFR Part 60 Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*

This rule is applicable to electric utility steam generating units greater than 250 million British thermal units per hour heat input of fossil fuel (either alone or in combination with any other fuel) for which construction, modification, or reconstruction is commenced after September 18, 1978. This rule was determined not to be applicable to Boilers 1, 6, 7 or 8, although each is a fossil-fueled boiler with a rated capacity of greater than 250 MM Btu/hr. These units were each constructed prior to 1978 and have not been reconstructed or modified since installation so as to become subject to the rule. In addition, the permittee is not an electric utility.

40 CFR Part 60 Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*

This rule is applicable to steam generating units that commence construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBtu/hr. This rule was determined not to be applicable to Boilers 1A, 6, 7, and 8 although each boiler has a rated heat capacity of greater than 100 MM Btu/hr. These boilers were all installed prior to 1984 and none has been reconstructed or modified since they were installed so as to meet the definition under this rule.

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40 CFR Part 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

This rule is applicable to steam generating units that have a maximum heat input capacity greater than or equal to 10 MMBtu/hr to 100 MMBtu/hr for which construction, modification, or reconstruction is commenced after June 9, 1989. This rule was determined not to be applicable to the boilers at the installation since all have a rated heat capacity of greater than 100 MMBtu/hr.

40 CFR Part 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

This rule was determined not to be applicable to the fuel oil storage tank although the capacity is greater than 75m<sup>3</sup>. This tank was constructed in 1968 and has not been reconstructed or modified since installation so as to meet the definition under this rule.

40 CFR Part 60 Subpart Y, *Standards of Performance for Coal Preparation Plants*

This rule is applicable to the following systems in coal preparation plants which process more than 200 tons per day and that commence construction or modification after October 24, 1974. Affected systems include thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), coal storage systems, and coal transfer and loading systems. This rule was determined to be not applicable to the installation because the boilers were constructed prior to 1974 and have ceased the combustion of coal.

**Maximum Achievable Control Technology (MACT) Applicability**

40 CFR Part 63, Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters*

This rule is applicable to installations that are major sources of HAPs. The voluntary limitations classify this installation as an Area Source of HAPs, limiting total HAPs emissions to less than 25.0 tons and individual HAPs emissions to less than 10.0 tons per consecutive twelve month period. Therefore, the installation is not subject to the provisions of this rule, due to the rescission of the Once In, Always In policy.

40 CFR Part 63 Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*

This rule is applicable to installations that are Area Sources for HAPs. The voluntary limitations classify this installation as an Area Source of HAPs, limiting total HAPs emissions to less than 25.0 tons and individual HAPs emissions to less than 10.0 tons per consecutive twelve month period. The installation is not subject to this regulation because all of the installation's boilers are gas-fired boilers, which are exempt per §63.11195(e).

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**

None.

**Compliance Assurance Monitoring (CAM) Applicability**

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

The CAM rule applies to each pollutant specific emission unit that:

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- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

40 CFR Part 64 is not applicable because none of the pollutant-specific emission units uses a control device to achieve compliance with a relevant standard.

### **Greenhouse Gas Emissions**

This source may be subject to the Greenhouse Gas Reporting Rule. However, the preamble of the GHG Reporting Rule clarifies that Part 98 requirements do not have to be incorporated in Part 70 permits operating permits at this time. In addition, Missouri regulations do not require the installation to report CO<sub>2</sub> emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation's CO<sub>2</sub> emissions were not included within this permit. If required to report, the applicant is required to report the data directly to EPA. The public may obtain CO<sub>2</sub> emissions data by visiting <http://epa.gov/ghgreporting/ghgdata/reportingdatasets.html>.

### **Other Regulatory Determinations**

10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*

This rule does not apply to units that combust only natural gas; therefore, it is not applicable to emission units EP1 through EP3. [10 CSR 10.260(1)(A)2.]

10 CSR 10-6.405, *Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating*

This rule does not apply to units that combust only natural gas; therefore, it is not applicable to emission units EP1 through EP3. [10 CSR 10-6.405(1)(C)]

### **Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis**

Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

## Response to Public Comments

The draft Part 70 Operating Permit Significant Modification for Vicinity Energy was placed on public notice May 8, 2020 for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: <https://dnr.mo.gov/env/apcp/permit-public-notices.htm>. Public comments were received from Mr. Robert Cheever, EPA Region 7. The comments are addressed in the order in which they appear within the letter(s).

### Comment #1:

In the "Description of Part 70 Significant Modification," on the draft permit cover page, MoDNR describes the applicability basis associated with both 40 CFR Part 63, Subpart DDDDD-*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters* and 40 CFR Part 63, Subpart JJJJJ-*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources*. EPA recommends MoDNR consider including this same discussion in the Statement of Basis and include a revised Statement of Basis as part of operating permit OP2018-006A.

### Response to Comment #1:

The Statement of Basis has been revised to include the applicability discussion for 40 CFR Part 63, Subpart DDDDD-*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters* and 40 CFR Part 63, Subpart JJJJJ-*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources*. The revised Statement of Basis is included in operating permit OP2018-006A.

Additionally, upon review it was discovered applicability changes to 10 CSR 10-6.220-*Restriction of Emission of Visible Air Contaminants*, and 10 CSR 10-6.261-*Control of Sulfur Dioxide Emissions* are necessary to incorporate into the proposed permit. These changes are detailed below:

#### 10 CSR 10-6.220-*Restriction of Emission of Visible Air Contaminants*

This regulation applies to all sources of visible emissions throughout the state of Missouri. There are two versions of this regulation that are in effect: the Missouri's State Implementation Plan (SIP) version and the Code of State Regulations (CSR) version. The differences are due to revisions to the CSR that have not been incorporated into the SIP. As it applies to this installation, the CSR version of 6.220 has an exemption for emission units fueled exclusively by natural gas while the SIP version does not include this exemption. Permit Condition 005 has been added to reflect the SIP version of this regulation. This permit condition contains the natural gas fired units, which are subject to the SIP version only. When the CSR version is incorporated into the SIP, Permit Condition 005 will no longer apply, and a permit modification will not be required.

#### 10 CSR 10-6.261 *Control of Sulfur Dioxide Emissions*

This regulation applies to any source that emits sulfur dioxide (SO<sub>2</sub>). An exception applies to all emission units at the installation subject to this regulation per 6.261(1)(A) since all units are fueled exclusively by natural gas. This exception requires reporting and record keeping according to the requirements in 10 CSR 10-6.261(4). Permit Condition 006 has been added to the operating permit to reflect these requirements. This permit condition contains the applicable requirements from 10 CSR 10-6.261 as reflected in Missouri's Code of State Regulations (CSR). This permit condition is a state requirement until this regulation is incorporated into the SIP. Once the SIP is updated, this permit condition will be both a state and federal requirement. A permit modification is not required for this change.