

Iowa Department of Natural Resources

Title V Operating Permit Fact Sheet

This document has been prepared to fulfill the public participation requirements of 40 CFR Part 70 and 567 Iowa Administrative Code (IAC) 24.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

The Iowa Department of Natural Resources (DNR) finds that:

1. MidAmerican Energy Company: Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center, located at 4401 Carlisle Road, Pleasant Hill, Iowa 50327, has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Mr. Stacy L. Earll, General Manager, (515) 281-2654.
2. MidAmerican Energy Company: Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center is engaged in the production of electric services (SIC 4911); Fossil Fuel Electric Power Generation (NAICS 221112). This facility consists of 11 significant emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ($\leq 10 \mu\text{m}$)	PM ₁₀	687.08
Particulate Matter	PM	688.24
Sulfur Dioxide	SO ₂	65.80
Nitrogen Oxides	NO _x	508.32
Volatile Organic Compounds	VOC	80.51
Carbon Monoxide	CO	755.74
Lead	Lead	0.01
Hazardous Air Pollutants ⁽¹⁾	HAP	11.40

⁽¹⁾ May include the following: (refer to Title V Application).

3. MidAmerican Energy Company: Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center submitted a Title V Operating Permit renewal application on May 8, 2025. Based on the information provided in these documents, DNR has made an initial determination that the facility meets all the applicable criteria for the issuance of an operating permit specified in 567 IAC 24.107.
4. DNR has complied with the procedures set forth in 567 IAC 24.107, including those regarding public notice, opportunity for public hearing, and notification of EPA and surrounding state and local air pollution programs.

DNR procedures for reaching a final decision on the draft permit:

1. The public comment period for the draft permit will run from September 4, 2025 through October 4, 2025. The beginning date of this public comment period also serves as the beginning of the U.S. Environmental Protection Agency's (EPA) 45-day review period, provided the EPA does not seek a separate review period. During this time, anyone may submit written comments on the permit. Mail signed comments to Jeff Gabby at the Polk County address shown below.
2. Written requests for a public hearing concerning the permit may also be submitted during the comment period. Any hearing request must state the person's interest in the subject matter, and the nature of the issues proposed to be raised at the hearing. DNR will hold a public hearing upon finding, on the basis of requests, a significant degree of relevant public interest in a draft permit. Mail hearing requests to Jeff Gabby at the Polk County address shown below.
3. DNR will keep a record of the issues raised during the public participation process, and will prepare written responses to all comments received. The comments and responses will be compiled into a responsiveness summary document. After the close of the public comment period, DNR will make a final decision on the renewal application. The responsiveness summary and the final permit will be available to the public upon request.

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DNR concludes that:

1. DNR has authority under 455B.133 Code of Iowa to promulgate rules contained in 567 IAC Chapters 20-35, including, but not limited to, rules containing emission limits, providing for compliance schedules, compliance determination methods and issuance of permits.
2. DNR has the authority to issue operating permits for air contaminant sources and to include conditions in such permits under 455B.134 Code of Iowa.
3. The emission limits included in this permit are authorized by 455B.133 Code of Iowa and 567 IAC Chapters 20-35.
4. DNR is required to comply with 567 IAC Chapter 24 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the DNR or Polk County from pursuing enforcement action for any violation.

Applicant: **MidAmerican Energy Company: Pleasant Hill Combustion Turbines /
Greater Des Moines Energy Center**

EIQ Number: 92-5848
Facility File Number: 77-13-002

Review Engineer:
Jeff Gabby

Application Evaluation

A. Project Briefing:

This project regards a Part 70 Title V permit to operate renewal (R4) application for three (3) combustion turbines, two (2) starting diesel engines, Unit 1 and Unit 2 GDMEC Combustion Turbines, an Auxiliary Boiler, an Emergency Generator, a Dew Point Heater, and a Diesel Fire Pump (265 bhp). Conditions transfer from DNR construction permits 93-A-525-S3, 93-A-526-S3, 93-A-527-S5, 02-A-048-P3, 02-A-049-P3, 02-A-050-P2, 02-A-054-P2, 02-A-051-P2, and 02-A-055-P2, for the equipment above. EU006 and EU007 are each 539 HP and are both "black start" engines as they are used to start a combustion turbine. GDMEC EU6 is 1039 HP and GDMEC EU20 is 265 HP.

The Parts Washer (EU 004), Fuel Storage Day Tank for Turbines (EU 009), Glycol Expansion Tank for Unit 1 (EU 010), Glycol Expansion Tank for Unit 2 (EU 011), Glycol Expansion Tank for Unit 3 (EU 012), Lube Oil System for Unit 1 (EU 013), Lube Oil System for Unit 2 (EU 014), Lube Oil System for Unit 3 (EU 015), Day Tank for Unit 1 Diesel Starting Engine (EU 016), Day Tank for Unit 2 Diesel Starting Engine (EU 017), Dew Point Heater (EU 110), Fuel Tank for Emergency Generator (EU GDMEC-EU 22), Fuel Tank for Fire Pump (EU GDMEC-EU 23), GDMEC Unit 1 Lube Oil Tank (EU GDMEC-EU 24), GDMEC Unit 2 Lube Oil Tank (EU GDMEC-EU 25), and Steam Turbine Lube Oil System (EU GDMEC-EU 26) are insignificant, per 567 IAC 22.103(2).

B. Applicable rules and regulations:

1. Emission limits and conditions: see DNR Construction Permits 93-A-525-S3, 93-A-526-S3, 93-A-527-S5, 02-A-048-P3, 02-A-049-P3, 02-A-050-P2, 02-A-054-P2, 02-A-051-P2, and 02-A-055-P2.

2. Opacity for EP 001, 002, 005, 006, 007, GDMEC- EP 6, AND GDMEC- EP 20: No more than 20% opacity. Opacity for GDMEC- EP 1, GDMEC- EP 2, GDMEC- EP 3, and GDMEC- EP 7: 0% opacity. (See Construction Permits.) The remainder of the facility is subject to VEs less than 20% opacity: Polk County Board of Health Rules and Regulations: Chapter V, Article IV, Section 5-9.

3. NSPS: EU 001, EU 002, and EU 005 are subject to regulation outlined in 40 CFR 60 Subpart GG, *Standards of Performance for Stationary Gas Turbines* (567 IAC 23.1(2) "aa") and Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-16 (n) (27).

GDMEC- EU 1 and GDMEC-EU 2 are subject to regulation outlined in 40 CFR 60 Subpart KKKK *Standards of Performance for Stationary Combustion Turbines* (567 IAC 23.1(2) "aaaa" and Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-16 (n) (79).

GDMEC- EU 3 is subject to regulation outlined in 40 CFR 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* (567 IAC 23.1(2)"lll") and Polk County Board of Health Rules and Regulations: Chapter V, Article VI, Section 5-16 (n).

The following requirements apply to EU 001, EU 002, and EU 005 from NSPS Subpart GG:

- Sulfur and nitrogen content of the fuel shall be monitored in compliance with 40 CFR 60.334(h).
- The frequency of determining the sulfur and nitrogen content of the fuel shall be in compliance with 40 CFR 60.334(i).
- Excess emissions of NO_x shall be reported in compliance with 40 CFR 60.334(j)(1).
- Excess emissions of SO₂ shall be reported in compliance with 40 CFR 60.334(j)(2).
- Periods of excess ice fog shall be reported in compliance with 40 CFR 60.334(j)(3).
- Periods of emergency fuel shall be reported in compliance with 40 CFR 60.334(j)(4).

Authority for Requirement: 40 CFR 60 Subpart GG

567 IAC 23.1(2)"aa"

Polk County Board of Health Rules and Regulations: Chapter V,
Article VI, Section 5-16(n)(27)

4. NESHAP:

a.) If the facility were to become a major source of HAPs, EU 001, EU 002, EU 005, GDMEC-EU 1, and GDMEC-EU 2 may become subject to the requirements of the NESHAP Subpart YYYYY, *National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines*. There are currently no area source NESHAP for Turbines fueled with natural gas only.

b.) If the facility were to become a major source of HAPs, GDMEC-EU 3 and GDMEC-EU 7 may become subject to the requirements of NESHAP Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters*. GDMEC-EU 3 is a natural gas auxiliary boiler, which are currently NESHAP exempt. Area source NESHAP JJJJJ does not cover process heaters, and GDMEC-EU 7 is a Dew Point Heater, which is considered a process heater. GDMEC-EU 7 is not, therefore, currently subject to a NESHAP.

c.) EU 006 is a compression ignition engine and was constructed / installed in 1989. MidAmerican Pleasant Hill/ GDMEC is an area source for HAPs. EU 006 is not subject to NSPS IIII. EU 006 is a black start engine, located at an area source, and is an existing stationary RICE, as it was constructed prior to June 12, 2006. Applicable 40 CFR 63 Subpart ZZZZ requirements for black start engines have been placed into the Title V permit for EU 006.

d.) EU 007 is a compression ignition engine and was constructed / installed in 1989. MidAmerican Pleasant Hill/ GDMEC is an area source for HAPs. EU 007 is not subject to NSPS IIII. EU 007 is a black start engine, located at an area source, and is an existing stationary RICE, as it was constructed prior to June 12, 2006. Applicable 40 CFR 63 Subpart ZZZZ requirements for black start engines have been placed into the Title V permit for EU 007.

e.) EU GDMEC-EU 6, Emergency Generator, and EU GDMEC-EU 20, Diesel Fire Pump, are each subject to NESHAP ZZZZ. They are existing, CI, emergency generators at a HAP area source. Applicable 40 CFR 63 Subpart ZZZZ requirements for existing, CI, emergency generators at a HAP area source have been placed into the Title V permit for EU GDMEC-EU 6 and EU GDMEC-EU 20.

f.) EU GDMEC-EU 3, Auxiliary Boiler, is natural gas fired, and therefore NESHAP exempt.

g.) EU GDMEC-EU 7, Dew Point Heater, is not subject to NESHAP JJJJJ, because EU GDMEC-EU 7 is a process heater and NESHAP JJJJJ does not cover process heaters..

5. PSD: Source is currently major (PSD) for CO, PM, PM₁₀, and NO_x. Facility has applied for and received DNR PSD permits for affected units. Any proposed PSD significant increase at the facility will require additional DNR PSD Construction Permits prior to modification or construction. The Pleasant Hill portion of the facility was permitted under DNR 93-A-525-S3, 93-A-526-S3, and 93-A-527-S5 as a PSD synthetic minor facility. The facility was permitted as PSD major when the GDMEC portion was added.

6. NAAQS: Facility is located in an attainment area. Air modeling is not required at this time.

7. Title IV: EU 005- Unit 3 Turbine is subject and is issued a Phase II Title IV permit and CSAPR (Cross-State Air Pollution Rule) permit: ORIS7145, concurrently with the Title V permit. GDMEC- EU 1 and GDMEC- EU 2 are issued the ORIS7985 Phase II Title IV permit and CSAPR (Cross-State Air Pollution Rule) permit concurrently with the Title V permit.

Pleasant Hill Energy Center combustion turbines 1, 2 and 3 are affected units under CSAPR (Cross-State Air Pollution Rule). These units are required to acquire allowances to cover their NO_x Annual, NO_x Ozone Season, and SO₂ emissions. Only combustion turbine 3 is subject to Acid Rain requirements for SO₂.

MidAmerican applied for the LME monitoring alternative November 25, 2008.

The Greater Des Moines Energy Center combustion turbines 1 and 2 are affected units under CSAPR (Cross-State Air Pollution Rule) and Acid Rain. These units are required to acquire allowances to cover their NO_x Annual, NO_x Ozone Season, and SO₂ emissions.

Only coal fired units are subject to NO_x under acid rain. The gas and oil fired units will only be subject to SO₂ under the acid rain program. CSAPR (Cross-State Air Pollution Rule) pulls in the NO_x requirements for the gas and oil fired units.

8. Stratospheric ozone: The only ozone depleting chemicals (regulated by 40 CFR 82) at Pleasant Hill Combustion Turbines / Greater Des Moines Energy Center are those used for air conditioning. 40 CFR 82, Subpart F, applies to the disposal of appliances containing Class I or Class II substances (i.e. air conditioners).

C. Compliance Assurance Monitoring (CAM) and Monitoring considerations:

Approved CAM Plans are included in the Title V Renewal Operating Permit for EU 001, EU 002, and EU 005. EP 001 and EP 002 use Low Mass Emissions (LME) monitoring for compliance with emission limits.

EU 005 is required to have monitoring from 40 CFR Part 75 for NO_x, SO₂, CO₂, and oil flow. The facility uses approved 40 CFR Part 75 Predictive Emission Monitoring (PME) for EU 005. This consists of analyzing a sample of #2 Fuel Oil from each new shipment for sulfur, nitrogen, and carbon content and using the results for actual emissions predictions. Natural gas has chemical analysis once per year, in order to predict the emissions from EU 005.

EU 006: Unit 1 Starting Diesel, which operates less than 10% of the year. Monitoring is required by 40 CFR 63 Subpart ZZZZ, in the form of operation and maintenance requirements. Applicable Subpart ZZZZ requirements have been placed into the Title V permit.

EU 007: Unit 2 Starting Diesel, which operates less than 10% of the year. Monitoring is required by 40 CFR 63 Subpart ZZZZ, in the form of operation and maintenance requirements. Applicable Subpart ZZZZ requirements have been placed into the Title V permit.

Units GDMEC-EU 1 (GDMEC Unit 1 Combustion Turbine) and GDMEC-EU 2 (GDMEC Unit 2 Combustion Turbine) are potentially the affected units for pollutant NO_x and CO because they use SCRs to control NO_x emissions and Oxidation Catalyst to control CO emissions and each of the two units has a pre-control NO_x and CO emission potentials of greater than 100 TPY.

However, the NOx limits are exempted limits pursuant to 40 CFR 64.2(b)(1)(iii) because the units are subject to the Acid Rain program. The NOx and CO limits are exempted limits pursuant to 40 CFR 64.2(b)(1)(vi) because they have corresponding continuous compliance determination method (CEMS systems as required by NSPS subpart KKKK and construction permits 02-A-048-P3 and 02-A-049-P3) specified by this Title V permit. Therefore, the units are not subject to CAM requirements.

GDMEC-EU 1 successfully passed emission tests for NOx, PM, Opacity, and CO on December 2-3, 2004. Compliance was demonstrated for combined cycle operation.

GDMEC-EU 2 successfully passed an emission test for NOx on November 30, 2004. It also successfully passed emission tests for PM, Opacity, and CO on November 24, 2004. Compliance was demonstrated for combined cycle operation.

GDMEC-EU 3 successfully passed emission tests for NOx and CO on January 10, 2005.

EU 006 & EU 007 are starting diesels for turbines; GDMEC EU3 is an auxiliary boiler; GDMEC EU 6 is an emergency generator; GDMEC EU7 is a dew point heater; and GDMEC EU 20 is a diesel fire pump, each having PTEs that are uncontrolled minor for all pollutants. The DNR Monitoring Guidance prescribes no testing and no agency or facility O&M Plans under these conditions.

Opacity Monitoring is not required for EUs when burning natural gas, since opacity is not expected. Opacity monitoring is required once per week when burning #2 Fuel Oil, and the unit is subject to <20% Opacity, specifically: EU 001, EU 002, and EU 005.

EU 006, EU 007, GDMEC- EU6, and GDMEC- EU20 are not operated long enough to warrant opacity monitoring, i.e., starting diesels, emergency generators, and fire -water pumps are operated only a very small amount of time, (<<876 hours per 12-month period).

D. Responsible Official:

Mr. Stacy L. Earll, General Manager, is in charge of a principle business function, that of producing and selling electricity, as well as making a profit for MidAmerican Energy Company. He meets the definition of a Responsible Official found in 567 IAC 22.100.