

Iowa Department of Natural Resources

Draft 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) 22.107(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 – Shenandoah Power Station, located at 900 W Ferguson Rd., Shenandoah, IA, 51601 has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Mr. Stacy Earll.
2. MidAmerican Energy Company – Shenandoah Power Station is an electric service plant. This facility consists of 20 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ($\leq 2.5 \mu\text{m}$)	PM _{2.5}	7.76
Particulate Matter ($\leq 10 \mu\text{m}$)	PM ₁₀	7.76
Particulate Matter	PM	7.76
Sulfur Dioxide	SO ₂	0.19
Nitrogen Oxides	NO _x	249.00
Volatile Organic Compounds	VOC	43.44
Carbon Monoxide	CO	114.55
Lead	Lead	0.00
Hazardous Air Pollutants ⁽¹⁾	HAP	0.23

⁽¹⁾ May include the following: Formaldehyde, Benzene, and Toluene.

3. MidAmerican Energy Company – Shenandoah Power Station submitted a Title V Operating Permit renewal application on January 25, 2023. 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 22.107.
4. DNR has complied with the procedures set forth in 567 IAC 22.107, 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 March 7, 2024 through April 6, 2024. During the public comment period, anyone may submit written comments on the permit. Mail signed comments to Taylor Dailey at the DNR address shown below. 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.
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 Taylor Dailey the DNR 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.

Taylor Dailey
Iowa Department of Natural Resources - Air Quality Bureau
Wallace State Office Building
502 9th St.
Des Moines, IA 50319-0034
Phone: (515) 725-9539
E-mail: Taylor.Dailey@dnr.iowa.gov

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 22 in conjunction with issuing a Title V Operating Permit.
5. The issuance of this permit does not preclude the DNR from pursuing enforcement action for any violation.

Title V Permit Review Notes

Applicant:	MidAmerican Energy Company – Shenandoah Power Station
SIC Code:	4911 (Electric Services)
City:	Shenandoah
County:	Page (F.O. #4)
EIQ#:	92-6888
Facility#:	73-01-018
Permit #:	01-TV-024R4
Reviewer:	Taylor Dailey
Date:	2/2024

Facility Identification

Facility Name:	MidAmerican Energy Company – Shenandoah Power Station
Facility Location:	900 W Ferguson Rd., Shenandoah, IA, 51601
Responsible Official:	Mr. Stacy Earll
Phone:	(515) 281-2654

Background:

MidAmerican Energy Company – Shenandoah Power Station is an electric service plant (SIC 4911). The facility consists of 20 significant emission points and 10 insignificant units. This is the second Renewal Title V permit for MidAmerican Energy Company – Shenandoah Power Station.

Regulatory Status:

- Title V Major Source Status by Pollutant

Pollutant	Major for Title V?
PM ₁₀	<input type="checkbox"/>
SO ₂	<input type="checkbox"/>
NO _x	<input checked="" type="checkbox"/>
VOC	<input type="checkbox"/>
CO	<input checked="" type="checkbox"/>
Lead	<input type="checkbox"/>
GHG	<input type="checkbox"/>
Individual HAP	<input type="checkbox"/>
Total HAPs	<input type="checkbox"/>

HAPs include Formaldehyde, Benzene, and Toluene.

Construction Permits:

The description of the significant emission units and their construction permits are listed below.

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-01	EU-01	Diesel Generator	00-A-362-S1
EP-03	EU-03	Diesel Generator	00-A-368-S1
EP-04	EU-04	Diesel Generator	00-A-371-S1
EP-05	EU-05	Diesel Generator	00-A-374-S1
EP-06	EU-06	Diesel Generator	00-A-377-S1
EP-07	EU-07	Diesel Generator	00-A-380-S1
EP-08	EU-08	Diesel Generator	00-A-383-S1
EP-09	EU-09	Diesel Generator	00-A-386-S1
EP-10	EU-10	Diesel Generator	00-A-389-S1
EP-11	EU-11	Diesel Generator	22-A-064
EP-1T14	EU-1T14	1,400 gallon Fuel Tank for EU-01	00-A-363
EP-2T14	EU-2T14	1,400 gallon Fuel Tank for EU-11	00-A-366
EP-3T14	EU-3T14	1,400 gallon Fuel Tank for EU-03	00-A-369
EP-4T14	EU-4T14	1,400 gallon Fuel Tank for EU-04	00-A-372
EP-5T14	EU-5T14	1,400 gallon Fuel Tank for EU-05	00-A-375
EP-6T14	EU-6T14	1,400 gallon Fuel Tank for EU-06	00-A-378
EP-7T14	EU-7T14	1,400 gallon Fuel Tank for EU-07	00-A-381
EP-8T14	EU-8T14	1,400 gallon Fuel Tank for EU-08	00-A-384
EP-9T14	EU-9T14	1,400 gallon Fuel Tank for EU-09	00-A-387
EP-10T14	EU-10T14	1,400 gallon Fuel Tank for EU-10	00-A-390

The following tanks had their construction permit rescinded and have been removed from the Title V permit. They were replaced by 2500 gallon tanks do not require construction permits per 567 IAC 22.1(2)"m" and are listed on the insignificant activities list in the Title V permit. The parts washer was also removed from the Title V application since the last renewal.

Emission Point Number	Emission Unit Number	Emission Unit Description	IDNR Construction Permit Number
EP-1T21	EU-1T21	2,100 gallon Fuel Tank for EU-01	00-A-364
EP-2T21	EU-2T21	2,100 gallon Fuel Tank for EU-02	00-A-367
EP-3T21	EU-3T21	2,100 gallon Fuel Tank for EU-03	00-A-370
EP-4T21	EU-4T21	2,100 gallon Fuel Tank for EU-04	00-A-373
EP-5T21	EU-5T21	2,100 gallon Fuel Tank for EU-05	00-A-376
EP-6T21	EU-6T21	2,100 gallon Fuel Tank for EU-06	00-A-379
EP-7T21	EU-7T21	2,100 gallon Fuel Tank for EU-07	00-A-382
EP-8T21	EU-8T21	2,100 gallon Fuel Tank for EU-08	00-A-385
EP-9T21	EU-9T21	2,100 gallon Fuel Tank for EU-09	00-A-388
EP-10T21	EU-10T21	2,100 gallon Fuel Tank for EU-10	00-A-391

Program Applicability:

- ✓ PSD: NO
Part 61 NESHAP: This facility is subject to the NESHAP for the Demolition and Renovation of Asbestos containing structures identified in 40 CFR §61.145.
- ✓ NSPS: NO
- ✓ Part 63 NESHAP: NESHAP Subpart ZZZZ
The diesel generators (EP-01, EP-03 through EP-11) are subject to NESHAP Subpart ZZZZ.
- ✓ Acid Rain: NO
- ✓ Stratospheric Ozone Protection: NO
- ✓ Prevention of Accidental Releases: NO
- ✓ CAM: NO

Potential Emissions:

Table 3. Potential Emission for MidAmerican Energy Company – Shenandoah Power Station

PM _{2.5} (tpy)	PM ₁₀ (tpy)	PM (tpy)	SO ₂ (tpy)	NO _x (tpy)	VOC (tpy)	CO (tpy)	Lead (tpy)	Total HAPs (tpy)
7.76	7.76	7.76	0.19	249.00	43.44	114.55	0.00	0.23

General Conditions

Compliance Status: The facility is in compliance.

Application History: this is the fourth renewal Title V of MidAmerican Energy Company – Shenandoah Power Station. MidAmerican Energy Company – Shenandoah Power Station submitted their Title V application on 1/25/2023.

Stack Testing:

Stack tests for CO were conducted on 3/22 and 3/23 of 2022 for EP-01 & EP-03 through EP-10 for compliance with 40 CFR 63 Subpart ZZZZ. The next tests for CO are required in three years (3/22 and 3/23 of 2025) or at 8760 hours, whichever comes first.

Stack testing for CO was conducted on 3/24/2022 for EP-11 for compliance with 40 CFR 63 Subpart ZZZZ. The next test for CO is required in three years (3/24/2025), or at 8760 hours, whichever comes first.

Specific Comments**EP-02**

Diesel Generator EP-02 was replaced by EP-11.

It is the exact same size and model as EP-02, and was also manufactured prior to April 1, 2006.

Diesel Generators (EP-01, EP-03 through EP-10, and EP-11):

1. These generators are grouped together in the Title V permit due to the similarities in unit set-up, emission limits and operational requirements.
2. The construction permits for these generators have been updated once since the issuance of first Title V permit with the addition of a catalytic oxidizer on each generator.
3. Each generator is limited to burn only #1 fuel oil, #2 fuel oil, or kerosene. Rated capacity for each generator is 147.6 gal/hr (2885 bhp).
4. Combined NO_x emission limit from EP-01 and EP-03 through EP-11 is 249 ton/yr.
5. See permit content for other emission limits.
6. See permit content for detailed operational limit requirements.
7. Because the total nameplate capacity for EP-01 and EP-03 through EP-11 is $\leq 25\text{MW}$, and the burning fuel has a sulfur content of $\leq 0.05\%$ (by weight), EP-01 and EP-03 through EP-11 all meet the conditions for the Acid Rain New Units Exemption as specified in 40 CFR 72.7 and 567 IAC 22.123(1).
8. These generators are subject to NESHAP 40 CFR 63 Subpart ZZZZ.
9. These generators are not subject to NSPS Subpart IIII because they were constructed before the NSPS IIII cut-off date.
10. No O&M plan is required at this time based on the periodic monitoring calculations.

Fuel Storage Tanks (see Table above and insignificant activity list in the permit):

1. The fuel storage tanks for each generator are grouped together in the permit due to their similarities.
2. The construction permits for the 2,100 gallon tanks were rescinded and the tanks removed. These were replaced by 2,500 gallon tanks that did not require a construction permit. The 2,500 gallon tanks are list in the insignificant activity table found in the Title V permit.
3. See the permit content for detailed requirements.
4. These tanks are not subject to NSPS or NESHAP subparts.
5. No stack testing is required for these tanks at this time.
6. No O&M plan is required at this time based on the periodic monitoring calculations.