

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. Flint Hills Resources Arthur, LLC, located at 2585 Quail Ave, Arthur, IA 51431. has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Jack Mitchell.
2. Flint Hills Resources Arthur, LLC is a Fuel Ethanol Manufacturing facility. This facility consists of 26 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ($\leq 2.5 \mu\text{m}$)	PM _{2.5}	179.75
Particulate Matter ($\leq 10 \mu\text{m}$)	PM ₁₀	188.51
Particulate Matter	PM	203.85
Sulfur Dioxide	SO ₂	100.18
Nitrogen Oxides	NO _x	128.77
Volatile Organic Compounds	VOC	184.09
Carbon Monoxide	CO	136.66
Lead	Lead	0
Hazardous Air Pollutants ⁽¹⁾	HAP	18-10

⁽¹⁾ May include the following: Acetaldehyde, Acrolein, Formaldehyde, Methanol, Hexane, Benzene, Toluene.

3. Flint Hills Resources Arthur, LLC submitted a Title V Operating Permit renewal application on April 23, 2020. 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 4, 2021 through April 4, 2021. During the public comment period, anyone may submit written comments on the permit. Mail signed comments to Zane Peters 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 Zane Peters at 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.

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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 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:	Flint Hills Resources Arthur, LLC
SIC Code:	2869
City:	Arthur
County:	Ida
EIQ#:	92-6807
Facility#:	47-04-001
Permit #:	10-TV-008R2
Reviewer:	Zane Peters
Date:	11/9/20

Facility Identification

Facility Name:	Flint Hills Resources Arthur, LLC
Facility Location:	2585 Quail Avenue, Arthur, IA 51431
Responsible Official:	Jack Mitchell
Phone:	(515) 817-2922

Background:

Flint Hills Resources Arthur, LLC is an ethanol plant (SIC 2869) manufacturing fuel grade ethanol with Dried Distillers Grain and Soluble (DDGS) as the primary by-product. DDGS will be sold as animal feed.

Flint Hills Resources Arthur, LLC has submitted their Title V renewal application. This is the second renewal of the Title V Operating Permit. The facility consists of 114 significant emission units and 23 insignificant emission points.

Regulatory Status:

- Title V Major Source Status by Pollutant
See Table 1 for details.

Table 1. Title V major source by pollutant

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

HAPs include Formaldehyde, Acetaldehyde, Acrolein, Methanol, Hexane, Toulene, and Benzene

Changes Since the Last Renewal:

Cover Page (pp. 1)

1. Updated permit number, expiration date, renewal application deadline
2. Updated Responsible Official and Permit Contact information
3. Updated the Supervisor of Air operating Permits section name

Facility Description and Equipment List

1. Updated Construction permit numbers and relevant EU Descriptions for for EPs S10, S30, S40, S90, FUG6, T01, T02 (pp. 5-7)
2. Added new EPs S31, S32, and S219 (pp. 7-8)

Plant-Wide Conditions

1. Updated permit number and Permit Duration dates (pp. 10)
2. Added the current “on or after” language to the particulate matter paragraph (pp. 10)

Emission Point-Specific Conditions

1. Updated Permit Number (pp. 12)
2. EP S10
 - a. Added EUs 134-136 to the EP S10 Emission Unit Table with their respective rated capacities (pp. 13)
 - b. Updated the rated capacities for EUs 68-71 (pp. 13)
 - c. Construction permit numbers updated to the current version (pp. 13-20)
 - d. The operating limits and record keeping requirements were updated to the most recent version (pp. 14-16)
3. EP S30
 - a. Rated capacity updated (pp. 28)
 - b. Construction permit numbers updated to the current version (pp. 28-30)
 - c. The operating limits and record keeping requirements were updated to the most recent version (pp. 28-29)
 - d. The exhaust flow rate was updated (pp. 29)
 - e. The PM₁₀ limit was removed (pp. 28-31)
 - f. The CAM plan was reviewed for this emission point. The calculations suggest that a test is needed. However, the facility conducted a stack test on November 13, 2015 that showed the PM rate was 0.14 lbs/hr. Based on the compliance margin, we will not require a stack test for this period.
4. S31
 - a. New EP – all relevant information was added to the permit from Iowa DNR Construction Permit 16-A-115
 - b. This unit is a Hammermill Drag Conveyor utilizing a baghouse with a CAM plan
5. S32
 - a. New EP – all relevant information was added to the permit from Iowa DNR Construction Permit 16-A-116
 - b. This unit is a Hammermill Feed Conveyor utilizing a baghouse with a CAM plan
6. S40
 - a. The construction permit numbers were updated to the most recent version

- b. The operating limits and recordkeeping were updated to the most recent version (pp. 44-47)
 - c. The exhaust flow rate was updated (pp. 47)
- 7. S50
 - a. A CAM plan was added in place of a facility O&M based on the data provided by the facility (pp. 56-59)
- 8. S60
 - a. A CAM plan was added in place of a facility O&M based on the data provided by the facility (pp. 63-65)
- 9. S90
 - a. The construction permit numbers were updated to the most recent version
 - b. The exhaust flow rate was updated (pp. 76)
- 10. S120
 - a. This emission unit is the source type subject to New Source Performance Standards (NSPS) Subpart DD – Standards of Performance for Grain Elevators. This emission unit, EU S120, is a column dryer with a column plate perforation not exceeding 2.4 mm diameter. Therefore, it is not subject to the particulate matter standards of this subpart
- 11. FUG6
 - a. The construction permit numbers were updated to the most recent version
 - b. The particulate emission limits were updated to the most recent version (pp. 89)
- 12. T01
 - a. The emission unit description was altered and the construction permit numbers were updated to the most recent version (pp. 94)
 - b. The operating limits and recordkeeping requirements were updated to the most current version (pp. 94)
- 13. T02
 - a. The emission unit description was altered and the construction permit numbers were updated to the most recent version (pp. 96)
 - b. The operating limits and recordkeeping requirements were updated to the most current version (pp. 96)
- 14. S219
 - a. New EP – added to the insignificant list because this unit meets the definition of “Small Unit Exemption” described in 567 IAC 22.1(2)"w"(1). In accordance with §60.4237(c), the engine shall be equipped with a non-resettable hour meter

General Conditions

1. The General Conditions were updated to the most recent version

Periodic Monitoring

All periodic monitoring requirements are in accordance with the Department's Periodic Monitoring Guidance Document.

EP-S10, EP-S20, EP-S30, EP-S40, EP-S70, and EP-S90 required CAM plans in the previous Title V permit. The most current Potential to Emit data keeps this requirement in effect.

EP-S50 is an existing emission point controlled by a Flare (CE C50). For this version of the Title V permit, its Potential to Emit numbers require a CAM plan utilizing a fire eye.

EP-S60 is an existing emission point controlled by a Flare (CE C60). For this version of the Title V permit, its Potential to Emit data requires a CAM plan utilizing control system monitoring.

EP-S31 is a new emission point to the facility controlled by a Fabric Filter Baghouse (CE C31). It requires a CAM plan that includes a pressure drop requirement.

EP-S21 is a new emission point to the facility controlled by a Fabric Filter Baghouse (CE C32). It requires a CAM plan that includes a pressure drop requirement.

END OF NOTES