

# 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) 24.107(6). 40 CFR Part 70 contains operating permit regulations pursuant to Title V of the Clean Air Act.

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

1. Central Iowa Renewable Energy (CORN), LP, located at 1303 Highway 3 East, Goldfield, IA has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Chris Boshart.
2. Central Iowa Renewable Energy (CORN), LP is an ethanol production facility. This facility consists of 38 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ( $\leq 2.5 \mu\text{m}$ )	PM <sub>2.5</sub>	77.40
Particulate Matter ( $\leq 10 \mu\text{m}$ )	PM <sub>10</sub>	80.25
Particulate Matter	PM	95.43
Sulfur Dioxide	SO <sub>2</sub>	0.91
Nitrogen Oxides	NO <sub>x</sub>	87.40
Volatile Organic Compounds	VOC	208.65
Carbon Monoxide	CO	104.58
Lead	Lead	0.00
Hazardous Air Pollutants <sup>(1)</sup>	HAP	23.95

<sup>(1)</sup> May include the following: Benzene, Ethyl Benzene, Hexane, Toluene, Xylenes (Mixed Isomers).

3. Central Iowa Renewable Energy (CORN), LP submitted a Title V Operating Permit renewal application on December 9, 2024. 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.

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

1. The public comment period for the draft permit will run from May 1, 2025 through May 31, 2025. During the public comment period, anyone may submit written comments on the permit. Mail signed comments to Derek Wedemeier 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 Derek Wedemeier 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 21-33, 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 21-33.
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 from pursuing enforcement action for any violation.

## Title V Operating Permit Review 2 Notes

Applicant:	<b>Central Iowa Renewable Energy (CORN), LP</b>
SIC Code:	<b>2869</b>
City:	Goldfield
County:	Wright, Field Office #2
EIQ#:	92-3132
Facility#:	99-05-003
Permit #:	10-TV-004R3
Reviewer:	Derek Wedemeier
Date:	<b>**DATE**</b>

### **Facility Identification**

Facility Name:	<b>Central Iowa Renewable Energy (CORN), LP</b>
Facility Location:	1303 Highway 3 East, P.O. Box 280, Goldfield, IA 50542
Responsible Official:	Chris Boshart
Phone:	(515) 825-3161

### **Background:**

Central Iowa Renewable Energy (CORN), LP is an ethanol plant (SIC 2869) manufacturing fuel grade ethanol with Dried Distillers Grain and Soluble (DDGS) as the primary by-product. Central Iowa Renewable Energy (CORN), LP submitted the fourth renewal application of their Title V Operating Permit to the DNR on December 9, 2024 in EASYAir. The facility consists of 28 significant emission points and 10 insignificant emission points.

### **Title V Applicability**

<b>Pollutant</b>	<b>Major for Title V?</b>
PM <sub>10</sub>	<input type="checkbox"/>
SO <sub>2</sub>	<input type="checkbox"/>
NO <sub>x</sub>	<input 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"/>

### **Program Applicability**

- PSD: No, this facility is a synthetic minor source. They are one of the 28 listed source categories (Fossil-Fuel Boilers (or combination thereof) totaling more than 250 MMBtu/hr.
- Title V: Yes
- Part 60 NSPS: Yes
  - 40 CFR 60 Subpart A – General Provisions
  - 40 CFR 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
  - 40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels)
  - 40 CFR 60 Subpart DD – Standards of Performance for Grain Elevators
  - 40 CFR 60 Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006
- Part 61 NESHAP: No
- Major Source of HAPs: No
- Part 63 NESHAP: Yes
  - 40 CFR 63 Subpart A - National Emission Standards for Hazardous Air Pollutants for Source Categories – General Provisions
  - 40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines
- Acid Rain: No
- Stratospheric Ozone Protection: Yes
- Prevention of Accidental Releases: Yes

CORN, LP is of the source type regulated by 40 CFR Part 63 Subpart VVVVVV- National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources. The department has determined that the acetaldehyde concentrations in fermentation and distillation vapor streams at dry-mill corn ethanol production facilities are below the applicability threshold for NESHAP Subpart VVVVVV (0.1% by weight). Therefore, the facility is not subject to 40 CFR Part 63 Subpart VVVVVV.

Both boilers are of the source category affected by the following federal rule: 40 CFR Part 63, Subpart JJJJJ – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Source*. The federal rule states that gas-fired boilers, as defined in 40 CFR 63.11237, are not subject to this part.

### **Emission Estimations**

The potential emissions calculations were based off of construction permit limits, AP-42 emission factors, stack test data, mass balance and engineering estimates provided by the facility. The 500ppmv allowable SO<sub>2</sub> SIP limit overestimates the potential emissions. The AP-42 emission factors for SO<sub>2</sub>, if available, were used instead and provide a more realistic potential value when compared to the previous year's emissions inventory.

### PTE Emission Values

PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Lead	Total HAPs
<b>Potential Emissions</b>								
95.43	80.25	77.40	0.91	87.40	208.65	104.58	0.00	23.95
<b>Actual Emissions 2024</b>								
35.69	33.14	32.26	0.52	30.25	76.08	82.65	0.00	6.91

### **Changes to the Permit**

#### New units

Emission Point Number	Emission Unit Number	Emission Unit Description	DNR Construction Permit Number
EP-S71	P-71	High Protein Meal Transfer	22-A-226
EP S91	S91A	High Protein Storage Bin (2)	22-A-227
	S91B	High Protein Conveyance	
EP S171	P170A	Distillation Process Additions/RTO Bypass	22-A-228
<b>New Insignificant Units</b>			
BF-195320		Centrate Discharge 1	
BF-126520		Centrate Discharge 2	

#### **General Changes**

- Update Permit Number
- Update Table of Contents
- Update Plant-Wide Conditions
- Update General Conditions
- Update footers

### **Emission Point Comments**

S10 – Natural gas usage limit of 193.5 mmscf/12 month rolling:  $193.5 \text{ mmscf/1yr} \times 1050 \text{ MMBtu}/10^6 \text{ scf} / 240 \text{ MMBtu/hr} = 846.6$  operating hours.

This unit is subject to NSPS Db. Operating conditions require maintaining records for date, hours of operation, and total natural gas usage.

S18 – Facility reported a 95% capture and 99% control efficiency. Fugitive emissions are reported in the application however they have not been included in the permit. Visible emissions monitoring is required once per day. DNR Periodic monitoring guidance (PMG) does not recommend testing or an O&M plan based on PTE and precontrol emissions. CAM does not apply because precontrol emissions do not exceed the major source threshold.

S20 - Facility is limited to receiving/processing 35,125,000 bushels of corn per rolling 12-month period. The amount of corn received from Gold Eagle Cooperative – Goldfield shall not exceed 50% of total bushels received at CORN, LP per 12-month rolling period. Truck dump pit has a rated capacity of 20,000 bushels/hr.  $35,215,000 \text{ bushels} / 20,000 \text{ bushels/hr} = 1,760.75$  operating hours is used for PTE. PMG does not recommend testing or an O&M plan based on PTE and

precontrol emissions. CAM does not apply because precontrol emissions do not exceed the major source threshold on a per unit basis.

S22 & S24 – These grain receiving pits and transfer legs (22.1 & 22.2) are subject to NSPS DD. Visible emissions checks are required once per calendar day for both S22 and S24. PMG suggests stack testing for PM & PM10 and a Facility O&M plan. The conditions from the operational limits meet the requirements of a Facility O&M. Testing will be waived. Testing was completed on 11/18/2020 for both points and passed at 34% & 35% of their PM10 emission limits. CAM does not apply because precontrol emissions do not exceed the major source threshold on a per unit basis.

S23 – EU P23 is subject to NSPS DD. Visible emissions checks are required once per calendar day for S23. PMG suggests a Facility O&M. Testing is not recommended based on PMG. The conditions from the operational limits meet the requirements of a Facility O&M. CAM does not apply because precontrol emissions do not exceed the major source threshold.

S30 – Hammermills and Rollermills are not allowed to run simultaneously except for a maximum of one hour when shutting down 1 system and starting the other. Visible emissions checks are required once per calendar day. PMG suggests one test for PM and PM10 when using emission limits and a facility O&M plan. Testing was last completed in 2012 and resulted in a test average of 0.27 lb/hr, approximately 18% of the emission limit. The test was initially rejected because it was completed 69% of the rated maximum capacity. However, due to production limitations the hammermill are not able to run at maximum capacity according to a letter dated June 18, 2022. This justification was accepted by the Department and testing requirements were removed from the S4 version of the construction permit. The facility stated the Hammermills did not operate in 2024 and only the rollermills were used. AP42 emission factors for grain crackers (similar to rollermills) are less than 50% of hammermills and based on the margin of compliance in the 2012 test, testing has been waived for this renewal. The operating conditions meet the requirements of a Facility O&M. The facility provided CAM spreadsheet uses 2012 stack test data when determining CAM. Precontrol emission do not exceed the major source threshold on a per unit basis. CAM is not required.

S31 – Hammermill #3 requires differential pressure drop of 0.1 to 10 inches of water column range to be monitored at least once per day. PMG suggests stack testing for PM and PM10 and a Facility O&M plan. Operational limit conditions meet the Facility O&M plan requirements. Testing will be waived. S31 was tested on 7/10/2018 and passed at approximately 25% of the emission limits. CAM does not apply because precontrol emission do not exceed the major source threshold on a per unit basis.

S40 - This facility (Plant No. 99-05-003) is of the source category, but not subject to 40 CFR Part 63, Subpart FFFF – *National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing*, because it is not a major source of hazardous air pollutants (HAP) emissions. These units are subject to NSPS VV. Annual stack testing is required for VOC and HAP. The Title V application included a CAM plan for CE40.

A compliance plan was included for S40 in the application for four (4) excess emissions events from 12/2023 to 10/2024. The cause for the excess emissions was reported as a failure to add water and additive to the scrubber. Two additional excess emission incident were reported on 3/5/2025 and 3/19/2025 due to a loss of power and the scrubber was shut down. The issue was resolved by restarting the scrubber once reliable power was restored.

S50 – Facility has a limit of 90 million gallons of ethanol (denatured or undenatured) by truck or rail per 12 month rolling period, 3.1 million gallons of denaturant.

Flare Operation: 2023 operating hours 2214 hours; PTE utilized 3333 hours (operating hours multiplied by a factor of 1.5 to more accurately reflect operation at the facility. Periodic Monitoring does not apply because there is no applicable short term VOC emission limits. Operational limits require the flare to operated at all times product is being loaded.

T61-T65 – These tanks store ethanol and/or gasoline. They are all subject to NSPS Kb and VV.

S70 – The construction permit for S70 (05-A-115-S7), DDGS Cooler, was updated since the previous renewal to increase the VOC limit. PMG suggest stack testing for PM, PM10, and VOC. The construction permit requires testing for PM/PM10 once every 3 years and VOC/HAP testing annually. CAM is required for the baghouse CE70.

S71 – This is a new piece of equipment controlled by baghouse C71. The facility reports a capture efficiency of 95% and a control efficiency of 99% for PM. Based on this information PMG does not recommend testing. A Facility O&M plan is recommended; however, the operational limits require daily VE checks. This and the other operational conditions satisfy the requirements of a Facility O&M. CAM does not apply because precontrol emission do not exceed the major source threshold.

S80 - This emission unit is of the source type subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart Q – Industrial Process Cooling Towers (40 CFR §63.400 through §63.407). However, since the unit does not use chromium based water treatment chemicals, it is not subject to NESHAP Subpart Q at this time. Quarterly TDS Sampling is required.

S90 – Facility is limited to loading/shipping 241,500 tons of DDGS per rolling 12-month period. Rated capacity of loadout is 220 tons/hour. VOC and HAP testing requirements have been removed from the S8 version of the construction permit. PMG does not recommend an O&M plan or testing for the control equipment baghouse CE90 based on capture and control efficiencies. CAM does not apply because precontrol emission do not exceed the major source threshold.

S91 – These are new storage bins and conveyance controlled by baghouse C91. Visible emission monitoring is required once per day. PMG does not recommend an O&M plan or testing for the control equipment baghouse CE91 based on capture and control efficiencies. CAM does not apply because precontrol emission do not exceed the major source threshold.

S110 – This is a 300 hp fire pump engine subject to NESHAP ZZZZ.

F81 – The construction permit for Fugitives from Truck Traffic was updated to reduce the required silt load testing frequency. The facility is required to conduct testing at least four (4) times per calendar year.

S170 – The distillation process is controlled by RTO CE170 and must operate at all times P170A operates, except for a maximum of 100hr of bypass per rolling 12-month period. Construction permit 17-A-032-S1 requires annual testing for VOC/HAP. PM, PM10, Opacity, and VOC are required to be tested every 36-months. CAM is required for the RTO.

S171 Bypass – This emission point is new to the Title V permit. CORN LP requested to add the option to bypass the RTO in project 22-145. This will be used during periods of maintenance or emergency. The bypass is limited to 100 hr/yr. PMG does not recommend any additional testing or O&M plans.

S180 – This 299.2 MMbtu/hr natural gas boiler is subject to NSPS Db. Continuous emissions monitoring (CEMs) for NOx is required by construction permit 17-A-033-S2. CEMs satisfies any additional testing suggested by PMG. CAM does not apply because Low NOx burners are inherent to the emission unit and have no parameters to monitor.

#### **Periodic Monitoring Guidance Summary Table**

Emission Point	Control Equipment	Type of O&M Plan	Stack Test – Required by	Visible Emissions Monitoring	NSPS	NESHAP
S10	-	-	NA - Recordkeeping	-	A, Db	-
S18	CE C18: Baghouse	NA	No	Daily	-	-
S20	CE20: Baghouse	NA	No	Daily	-	-
S22/S24	CE22: Baghouse	Facility*	Waived – Tested 2020	Daily	A, DD	-
S23	CE23: Baghouse	Facility*	No	Daily	-	-
S30	CE30: Baghouse	Facility*	Waived – Tested 2012	Daily	-	-
S31	CE31: Baghouse	Facility*	Waived – Tested 2018	-	-	-
S40	CE40: Scrubber	CAM	Yes: VOC, HAP – CP	-	A, VV	-
S50	CE50: Enclosed Flare	NA	NA	-	-	-
T61-T65	NA	-	-	-	A, Kb, VV	-
S70	CE70: Baghouse	CAM	Yes: See permit – CP	-	-	-
S71	CE C71: Baghouse	Facility*	No	Daily	-	-
S90	CE90: Baghouse	NA	NA	Daily	-	-
S91	CE C91: Baghouse	NA	NA	Daily	-	-
S110	-	-	-	-	-	A, ZZZZ
F120	-	-	-	-	A, VV	-
S170	CE170: RTO	CAM	Yes: See permit – CP	-	-	-
S180	-	-	NA – NOx CEMS	-	A, Db	-

\*Operational limits meet the requirements of a Facility O&M Plan.