

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.

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

1. KraftHeinz – Muscatine, located at 1357 Isett Avenue, Muscatine, IA 52761 has applied to renew their Title V Operating Permit. The designated responsible official of this facility is Wendy Nugent.
2. KraftHeinz – Muscatine is a Canned Fruits, Vegetables, Preserves, Jams, and Jellies facility. This facility consists of 37 emission units with potential emissions of:

Pollutant	Abbreviation	Potential Emissions (Tons per Year)
Particulate Matter ($\leq 2.5 \mu\text{m}$)	PM _{2.5}	2.58
Particulate Matter ($\leq 10 \mu\text{m}$)	PM ₁₀	15.85
Particulate Matter	PM	27.67
Sulfur Dioxide	SO ₂	0.48
Nitrogen Oxides	NO _x	41.79
Volatile Organic Compounds	VOC	143.56
Carbon Monoxide	CO	81.99
Lead	Lead	0.00
Hazardous Air Pollutants ⁽¹⁾	HAP	2.37

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

3. KraftHeinz – Muscatine submitted a Title V Operating Permit renewal application on June 13, 2024 and any additional information describing the facility on September 6, 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.

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

1. The public comment period for the draft permit will run from February 20, 2025 through March 22, 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 Application Review Notes

Applicant:	KraftHeinz – Muscatine
SIC Code:	2033 (Canned Fruits, Vegetables, Preserves, Jams, and Jellies)
City:	Muscatine
County:	Muscatine (FO #6)
EIQ#:	92-2344
Facility#:	70-01-005
Permit #:	01-TV-020R4
Reviewer:	Derek Wedemeier
Date:	**DATE**

Facility Identification

Facility Name:	KraftHeinz – Muscatine
Facility Location:	1357 Isett Avenue, Muscatine, IA 52761
Responsible Official:	Wendy Nugent
Phone:	(563) 263-5711

Background

KraftHeinz – Muscatine is a food products manufacturer of vinegar, condiments, soups, gravies and sauces. The majority of emissions from this facility come from manufacturing processes that vent VOC emissions from holding tanks, particulate emissions emitted through the process of adding dry ingredients to large mixing containers, and various emissions from natural gas-fired boilers and electric generators.

This is the fourth renewal permit for KraftHeinz – Muscatine. The application for this renewal permit was received June 13, 2024.

Regulatory Status

KraftHeinz – Muscatine is a major source for Title V. See Table 1 major source by pollutant.

**Table 1
Title V Major Source by Pollutant**

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

HAPs emitted from the facility may include: Acetaldehyde, Acrolein, Formaldehyde, Hexane, and Methanol.

Program Applicability

- PSD: NO
- Part 60 NSPS: YES. See Table 2.
- Part 61 NESHAP: NO, except Subpart M (asbestos).
- Part 63 NESHAP: YES. See Table 2.

**Table 2
NSPS and NESHAP Applicability**

EP	Source Description	Permit#	NSPS and NESHAP Subparts
EP12	Zurn Boiler #6 (90.5 MMBtu/hr)	01-A-1111-S1	NSPS Dc
EP13	Zurn Boiler #7 (90.5 MMBtu/hr)	01-A-1112-S1	NSPS Dc
EP60 ⁽¹⁾	Electric Generator	Exempt	NSPS IIII, NESHAP ZZZZ
EP61 ⁽¹⁾	Diesel Fire Pump	Exempt	NSPS IIII, NESHAP ZZZZ
EP82	70 kW Emergency Generator	Exempt	NSPS JJJJ, NESHAP ZZZZ
EP84	175 kW Emergency Generator	Exempt	NSPS IIII, NESHAP ZZZZ

⁽¹⁾ New engines replaced by previous engines with the same EP ID's.

40 CFR 60 Subpart Kb Applicability: Storage vessels at this facility are not subject to NSPS Subpart Kb despite having been constructed/reconstructed/modified after 1984 and used to store volatile organic liquids with capacities greater than 75 m³, because the only volatile component in the liquid vessels are acetic acid in all cases, and alcohol for insignificant unit A-MS-1. Using the Antoine equation at ambient temperatures for pure acetic acid, the maximum true vapor pressure is less than 15.0 kPa, which is a conservative estimate considering the acetic acid is diluted in most cases. For the alcohol storage tank, the insignificant unit is exempt despite having a capacity of greater than 151 m³ and maximum true vapor pressure of greater than 3.5 kPa using the Antoine equation because it is specifically exempted in §60.110b(d)(7) for beverage alcohol.

- Major Source of HAPs: NO
- CSAPR: NO
- Acid Rain: NO. The facility does not generate electricity for wholesale or retail sale and does not own or operate one of the Phase I or Phase II units listed in 40 CFR 73.10.
- Stratospheric Ozone Protection: YES
- Prevention of Accidental Releases: YES
- CAM: NO. All potential pre-control emissions are less than the major source thresholds.

Potential and Actual Emissions

Potential and actual emissions are listed in Table 3.

**Table 3
Potential and Actual Emissions**

Pollutant	Potential Emissions (tons/yr)	Reported 2023 Actual Emissions (tons/yr)
PM _{2.5}	2.58	0.10
PM ₁₀	15.85	0.12
PM	27.67	0.26
SO ₂	0.48	0.06
NO _x	41.79	1.70
VOC	143.56	10.83
CO	81.99	0.10
Lead	0.00	0.00
Total HAP	2.37	0.31

- Emergency engine potential emissions for EP60, EP61, and EP84 were based on NSPS standards as opposed to AP-42 emission factors since they are more stringent than the AP-42 emission factors except for CO. In this case, the AP-42 emission factor was used.
 - SO₂ emissions for these emission units are based off the NSPS sulfur content limit (15 ppm), assuming all of the sulfur in the fuel is emitted. See equation below for explanation:

$$\left(\frac{15\text{ppm}}{10^6}\right) * \left[(\text{bhp}) * \left(\frac{7000\text{Btu}}{\text{hp} * \text{hr}}\right) * \left(\frac{\text{lb}}{19300\text{Btu}}\right) \right] * \left(\frac{64 \frac{\text{lb}}{\text{lb} * \text{mol}} \text{Sulfur Dioxide (SO}_2\text{)}}{32 \frac{\text{lb}}{\text{lb} * \text{mol}} \text{Sulfur (S)}}\right) * \left(\frac{500\text{hr}}{\text{yr}}\right) * \left(\frac{\text{ton}}{2000\text{lb}}\right) = \text{ton/yr}$$

- VOC emissions are estimated by adding both the AP-42 emission factors for exhaust and crankcase emissions.
- For EP74, PM emissions were conservatively assumed to be equal to PM₁₀ emissions based on the construction permit limit for PM₁₀.

Compliance Status

The facility is currently considered to be in compliance.

Periodic Monitoring Guidance/CAM

Periodic monitoring requirements were evaluated based on the Department’s Periodic Monitoring Guidance (PMG) document. Stack testing was not required because uncontrolled emissions did not cross the significant threshold. The facility operation and maintenance (O&M) plan was waived for EP75, because the construction permit already requires the facility to maintain an O&M plan for the scrubber.

Compliance Assurance Monitoring (CAM) requirements were evaluated based on the Department’s CAM Spreadsheet. CAM requirements are not applicable for this renewal Title V operating permit because all potential pre-control emissions are less than the major source thresholds.

Changes Made To the Title V Permit Since the Previous Issuance

New Insignificant Additions to Title V Permit

Insignificant Emission Unit Number	Insignificant Emission Unit Description	Capacity
M-SS-05	Cooker 1	750 gal
M-SS-06	Cooker 2	750 gal
S-SS-02	High Fructose Corn Syrup Tank	500 gal
G-FT-30	Vinegar Tank	2500 gal

Rescinded Construction Permits

Emission Point	Construction Permit	Date Rescinded
G-FT-S14 (Not in previous renewal)	01-A-105-S2	8/21/2024
G-FT-S15 (Not in previous renewal)	01-A-106-S2	8/21/2024
EP 74	96-A-1297-S3	8/21/2024
EP 76 (Not in previous renewal)	98-A-657-S2	8/21/2024

General Changes

- Updated the Table of Contents.
- Updated Equipment List with updated descriptions for significant and insignificant emission units.
- Updated Plant-Wide Conditions
- Updated General Conditions
- The facility requested administrative changes to the Title V draft documents prior to issuance, which include the following:

Emission Point-Specific Comments

- Controlled emissions of VOC for EP30 and EP31 on the Form 3.0 for these units appear to be missing the "e-05" text with the number.
- Emissions for each emission unit emitting through EP74 appear to be duplicated for the emission point. The construction permit limits emissions through the emission point, not each individual unit; therefore, emissions should be half of the permit limits for each emission unit on the Form 3.0's for these units. The same principle applies to the CAM spreadsheet.
- The CE-01 page for CE32 shows incorrect emission unit number (E-SS-10 instead of F-SS-06).
- The Reporting & Recordkeeping requirement to maintain tank dimensions and capacities of the storage tanks for emission points G-FT-S17, G-FT-S18, G-FT-S19, and G-FT-S20 required by NSPS Subpart Kb was removed since the units are not subject to Subpart Kb.

EP1A, EP1B, and EP2 (Mixing Tanks):

These are new emission points for the gravy and mustard platforms. These points were created after relocating equipment without obtaining the required permits. A construction permit application was submitted to the DNR 8/16/2024. Project 24-270 consists of 3 construction permits for these emission points. The construction permits were issued 11/19/2024.

EP20 through EP25 (Cookers #3 - #8): No Changes

EP12 & EP13 (Zurn Boilers #6 & #7):

No changes. This unit shall combust natural gas only and complete recordkeeping for fuel usage. This unit is not subject to NESHAP DDDDD because the facility is not a major source for HAPs.

EP18, EP30, EP31 (Deaerators)

These pieces of equipment use condensers as control equipment and vent indoors. Precontrol emission totals for VOC do not exceed the major source threshold and CAM does not apply. Periodic monitoring guidance does not recommend any additional monitoring.

EP60, EP61, EP84 (Generators)

These are diesel fueled emergency generators subject to NSPS IIII and NEHSAP ZZZZ.

EP75 (Salt Briner):

No changes. A visible emissions observation is required once per calendar day while EP75 is in operation. Periodic monitoring guidance recommends a Facility O&M Plan for the scrubber. The conditions listed require the owner or operator to develop an O&M plan including a preventative maintenance schedule, meeting the Facility O&M plan requirement. Stack testing is not recommended based on PMG. Precontrol emission totals for PM do not exceed the major source threshold so CAM does not apply.

EP78, EP79, EP80, and EP81 (Pre-Mix Kettles):

No changes. There are no operating requirements for these pieces of equipment.

EP-82 (Emergency Generator):

This spark ignition engine is fueled by natural gas and is subject to NESHAP ZZZZ and NSPS JJJJ.

EP83 (Acetator #2-#6)

These units are controlled by CE83, Packed bed scrubber, for VOCs and Acetaldehyde. Operating conditions specify total liquor flow rate and pressure drop for the control equipment along with the requirement to collect and record these values on a daily basis. PMG recommends a Facility O&M and one (1) test for Single HAP-Acetaldehyde. This emission point was last stack test on 6/17/2015. Single HAP result average was 0.07 lb/hr, approximately 35% of the emission limit. Based on the margin of compliance and daily monitoring of the control equipment, a test for Single HAP will not be required during this renewal. CAM does not apply because precontrol emission totals do not exceed the major source threshold on a per unit basis.