

Air Permit to Construct - New

version 1.2

(Submission #: HQB-E2C1-ZEVEW, version 1)

Digitally signed by:
CERIS-ND
Date: 2025.03.28 11:46:00 -05:00
Reason: Submission Data
Location: State of North Dakota

Details

Submission ID HQB-E2C1-ZEVEW

Form Input

Form Instructions

General Process for all Pre-Construction Permitting

NOTE: At the very minimum, an application should include the following items:

1. A written description of the proposed project and the facility including site diagrams (if a physical change is proposed) and applicable process descriptions and technical specifications.
 2. A summary of Hazardous Air Pollutant emissions and compliance with the Air Toxics Policy.
 3. A written section addressing Title V and PSD applicability.
 4. A summary of state and federal rule applicability including a listing of any New Source Performance Standards (NSPS, see 40 CFR 60) and National Emission Standards for Hazardous Air Pollutants (NESHAP, see 40 CFR 63) subparts that apply.
 5. A statement addressing any dispersion modeling requirements for Criteria Pollutants or Air Toxics and the inclusion of any required modeling analysis with a complete method description in accordance with the State Air Quality Analysis Guide or Department guidance.
 6. All Applicable Air Quality Permit Application forms.
 7. The \$325 Permit to Construct filing fee payment per NDAC 33.1-15-23-02.
- [Additional Pre-Construction Permitting Information](#)

Section A - Applicant Information

Applicant

First Name	Last Name	
Christopher	Ashworth	
Title		
Plant Manager		
Phone Type	Number	Extension
Mobile	772.486.5299	
Email		
cashworth@lallemand.com		

Section B - Source Information

Permit Application for Air Contaminant Sources

Follow link to complete form SFN 8516 and upload below. If this form is already included in your application package, please upload complete application in Section D instead of this Section.

[Link to SFN 8516 - Permit Application for Air Contaminant Sources](#)

Upload form SFN 8516

SFN8516.signed.pdf - 03/28/2025 11:31 AM

Comment

SFN8516 attached

Section C - Source Location

Facility Name

Dakota Yeast LLC

Facility Location:

46.32676692,-96.61801031

Section D - File Upload

File Upload

Select and upload applicable SFN permit forms, from the list below, to detail information provided in Section D of SFN 8516.

DO NOT ADD CONFIDENTIAL INFORMATION to this form. If you have Confidential Information see NDAC 33.1-15-14-01-16.

[NDAC 33.1-15-14-01-16](#)

Please also remember to upload all additional documents necessary to meet Steps 1-5 of the Form Instructions Section.

Additional Forms

NONE PROVIDED

Attachments

Dakota Yeast PTC Application.signed.pdf - 03/28/2025 11:31 AM

Comment

PTC application attached

March 27, 2025

North Dakota Department of Environmental Quality
4201 Normandy Street
Bismarck, ND 58503-1324

**Re: Dakota Yeast, LLC
Permit to Construct Application**

To whom it may concern:

This letter and attachments constitute a Permit to Construct (PTC) application for the Dakota Yeast, LLC facility located in Wahpeton, ND as established in NDAC 33.1-15-14-02.

Dakota Yeast, LLC (Dakota Yeast) operates a yeast production facility located at 18175 Red River Road West, Wahpeton, North Dakota (Facility) authorized under Permit to Operate (PTO) No. AOP-28039 v2.0. This PTO was preceded by Permit to Construct No. PTC18037, both of which feature an emission limit for acetaldehyde which Dakota Yeast is requesting be removed as a result of this requested PTC. Following removal of this limit, the uncontrolled potential to emit (PTE) of acetaldehyde (which is a hazardous air pollutant (HAP)) will result in the facility becoming a major source of HAP, which will lead to applicability of 40 CFR 63 Subpart CCCC – National Emissions Standards for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast (MACT CCCC), and, eventually, the need for the facility to obtain a Title V PTO. Additionally, AOP-28037 v2.0 and PTC18037 feature a volatile organic compounds (VOC) emission limit which Dakota Yeast requests be modified by this requested PTC.

This cover letter describes the proposed change, including identifying specific existing PTO conditions requested to be revised or removed and how MACT CCCC will apply post-change. Post-change PTE calculations and required forms are attached, along with a facility plot plan, process flow diagram, and \$325 application fee.

Proposed Permit Changes

PTC18037¹ contains the following limits, located as a table in Condition II.A, which apply to Fermenters 1-4 (EU 1-4/EP 1-4) and are intended to maintain the facility's status as a synthetic area source of HAP, and thus a non-Title V source:

- VOC – 95.0 tons/year (12-month rolling total)
- Acetaldehyde – 9.95 tons/year (12-month rolling total)

With this PTC application, Dakota Yeast requests the removal of the acetaldehyde limit, and revision to the VOC limit from 95.0 tons/year to 240.0 tons/year. Note that the facility is classified as a Yeast Production facility, which is not a listed source category at 40 CFR 52.21(b)(1)(i)(a),

¹ Similar limits also appear in AOP-28037 v2.0

thus the federal Prevention of Significant Deterioration (PSD) major source threshold is 250 tons per year of any criteria pollutant. To accompany the proposed removal/revision of these emission limits, the following related requirements are also proposed to be removed or revised:

- Condition II.C – The facility currently uses a Continuous Emission Monitoring System (CEMS) to monitor VOC emissions to demonstrate compliance with the 95.0 tons/year limit. In addition to demonstrating compliance with the revised VOC limit, Dakota Yeast requests the inclusion of a separate condition for use of the CEMS to comply with MACT CCCC, drawn from 40 CFR §63.2163 (MACT CCCC).
- Condition II.D – The facility is currently required to, on a monthly basis, calculate emissions of acetaldehyde and VOC for the preceding 12 months, no later than the 15th of each month. With the proposed removal of the limits in Condition II.A, Dakota Yeast requests the references to acetaldehyde be removed. Following issuance of the requested PTC, Dakota Yeast will continue to calculate 12-month rolling emissions of VOC for comparison against the 240.0 ton/year limit.
- Condition II.E – The facility is currently required, once per permit term, to conduct emissions testing to determine the emission rate of acetaldehyde, which is used along with the VOC CEMS to determine actual emissions of acetaldehyde. With the proposed removal of the limits in Condition II.A, this requirement would no longer be necessary, and Dakota Yeast requests that it be removed.

Finally, as part of this application, Dakota Yeast requests authorization for the construction and initial operation of a new Fermenter 5, which is expected to have similar dimensions as existing Fermenter 4.

Post Change Potential to Emit

Following the requested removal of the limits in Condition II.A, the revised facility-PTE will be as shown in the following table. Detailed emission calculations are provided as an attachment to this application. For context, expected maximum actual emissions are also quantified in the second table below:

Criteria Pollutant and HAP PTE Summary

Emission Unit(s)	Emission Point	VOC (tpy)	Acetaldehyde (tpy)
Fermenter Unit #1	F1	75.56	23.72
Fermenter Unit #2	F2	75.56	23.72
Fermenter Unit #3	F3	75.56	23.72
Fermenter Unit #4	F4	16.47	2.97
Fermenter Unit #5	F5	16.47	2.97
Facility Wide Totals (Uncontrolled)		259.61	77.11
Facility-wide Totals (limited)		240.0	77.11

Criteria Pollutant and HAP Maximum Expected Actual Emissions Summary

Emission Unit(s)	Emission Point	VOC (tpy)	Acetaldehyde (tpy)
Fermenter Unit #1	F1	40.66	5.84
Fermenter Unit #2	F2	45.85	14.40
Fermenter Unit #3	F3	16.29	2.32
Fermenter Unit #4	F4	10.00	1.80
Fermenter Unit #5	F5	10.00	1.80
Facility Wide Totals		122.80	26.16

Subpart CCCC Applicability and Compliance

Following the requested removal of the acetaldehyde limit in Condition II.A, Dakota Yeast will be classified as a major source of HAP emissions and will then be subject to MACT CCCC, specifically Fermenters 1-4 will be existing facilities and Fermenter 5 will be a new facility subject to the subpart. It is worth noting that from the period of 2017, when Dakota Yeast, LLC took ownership of the facility through the issuance of PTC18037 in December of 2018, which established the synthetic minor limit on acetaldehyde to establish Dakota Yeast as an area source of HAP, Dakota Yeast was subject to MACT CCCC, and demonstrated compliance accordingly.

Historically, and during the time in which Dakota Yeast had demonstrated compliance with MACT CCCC, Dakota Yeast was primarily engaged in the production of baker's yeast, while currently, and in the foreseeable future, Dakota Yeast produces a variety of yeast strains, including baker's yeast, as well as specialty yeasts intended for fuel ethanol manufacturers. Following the removal of the limit in Condition II.A, Dakota Yeast understands that compliance with MACT CCCC will be required for those batches in which baker's yeast is produced, as the affected facility is limited to producing yeast for bread dough or other baked products, and production of specialty yeast is excluded from applicability as described at §63.2131(a)(1), §63.2132(e), and §63.2192 (emphasis added in bold underline):

§63.2131 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a nutritional yeast manufacturing facility that is, is located at, or is part of a major source of HAP emissions.

*(1) A manufacturer of nutritional yeast is a facility that makes yeast for the purpose of becoming an ingredient in dough for bread or any other yeast-raised baked product, or for becoming a nutritional food additive intended for consumption by humans. **A manufacturer of nutritional yeast does not include production of yeast intended for consumption by animals, such as an additive for livestock feed.***

Fuel ethanol manufacturing facilities, which make use of yeast in their fermentation processes, co-manufacture animal feed.

§ 63.2132 What parts of my plant does this subpart cover?

...

*(e) The emission limitations in Table 1 to this subpart **do not apply to fermenters during the production of specialty yeast** (defined in § 63.2192).*

§ 63.2192 What definitions apply to this subpart?

...

Specialty yeast includes, but is not limited to, yeast produced for use in wine, champagne, whiskey, and beer.

While not intended for human consumption, fuel ethanol manufacturers produce an intermediate referred to as “beer,” which is further distilled into high-percentage alcohol.

Dakota Yeast will establish compliance demonstration programs, including its CEMS, to identify the types of yeast produced on a batch-by-batch basis and report on compliance when manufacturing yeast that is included in the affected facility for MACT CCCC.

Consistent with §63.2133(c)(2), Dakota Yeast will demonstrate compliance with MACT CCCC no later than 1 year following becoming a major source of HAP, which will be the day of issuance of the requested PTC. Note that while Fermenters 1-4 constitute “existing facilities,” Dakota Yeast will be demonstrating compliance with emission limits which are required for new facilities. Fermenter 5 will be required to demonstrate compliance upon startup.

§ 63.2133 When do I have to comply with this subpart?...

(c) If you have an area source that increases its emissions, or its potential to emit, so that it becomes a major source of HAP, then paragraphs (c)(1) and (2) of this section apply.

(1) Any portion of the existing facility that is a new affected source or a new reconstructed source must be in compliance with this subpart upon startup.

(2) All other parts of the affected source must be in compliance with this subpart by no later than 1 year after it becomes a major source.

§ 63.2132 What parts of my plant does this subpart cover?

...

(f) An affected source is a “new affected source” if you commenced construction of the affected source after October 19, 1998, and you met the applicability criteria in § 63.2131 at the time you commenced construction.

Fermenters 1-4 were constructed prior to 1998, so they are not new, nor have they been reconstructed; thus, they are considered existing. Fermenter 5 will be considered a new affected source.

As you review this application, please do not hesitate to contact me at (701) 672-4210 or cashworth@lallemand.com if you have any questions or comments. Dakota Yeast has enclosed a check for the required \$325 filing fee.

Sincerely,



Chris Ashworth
Plant Manager, Dakota Yeast

Attachments:

- Attachment 1: NDDEQ Application Forms (3)
- Attachment 2: Potential to Emit Calculations
- Attachment 3: Process Flow Diagram
- Attachment 4: Highlighted copy of 40 CFR 63 Subpart CCCC to indicate applicable citations

cc: Jessica Kellerman (via email: jkellerman@lallemand.com)



PERMIT APPLICATION FOR AIR CONTAMINANT SOURCES

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF AIR QUALITY

SFN 8516 (9-2021)

SECTION A - FACILITY INFORMATION

Name of Firm or Organization Dakota Yeast, LLC				
Applicant's Name Christopher Ashworth				
Title Plant Manager		Telephone Number (701) 672-4210		E-mail Address cashworth@lallemand.com
Contact Person for Air Pollution Matters Christopher Ashworth				
Title Plant Manager		Telephone Number (701) 672-4210		E-mail Address cashworth@lallemand.com
Mailing Address (Street & No.) 18175 Red River Road West				
City Wahpeton		State ND		ZIP Code 58075
Facility Name Dakota Yeast LLC				
Facility Address (Street & No.) 18175 Red River Road West				
City Wahpeton		State ND		ZIP Code 58075
County Richland		Coordinates NAD 83 in Decimal Degrees (to fourth decimal degree)		
		Latitude 46.32676692		Longitude -96.61801031
Legal Description of Facility Site				
Quarter	Quarter	Section Sec 20	Township T133N	Range R47W
Land Area at Facility Site 10 Acres (or) _____ Sq. Ft.		MSL Elevation at Facility 1130.2		

SECTION B - GENERAL NATURE OF BUSINESS

Describe Nature of Business	North American Industry Classification System Number	Standard Industrial Classification Number (SIC)
Nutritional Yeast Production		2099

SECTION C - GENERAL PERMIT INFORMATION

Type of Permit? ☒ Permit to Construct (PTC) ☐ Permit to Operate (PTO)	
If application is for a Permit to Construct, please provide the following data:	
Planned Start Construction Date Plant is existing and no additions or modifications are expected	Planned End Construction Date Plant is existing (Constructed 1989); New Ownership transfer May 2017

SECTION D – SOURCE IDENTIFICATION AND CATEGORY OF EACH SOURCE INCLUDED ON THIS PERMIT APPLICATION

Your Source ID Number	Source or Unit (Equipment, Machines, Devices, Boilers, Processes, Incinerators, Etc.)	Permit to Construct				Minor Source Permit to Operate						
		New Source	Existing Source Modification	Existing Source Expansion	Existing Source Change of Location	New Source	Existing Source Initial Application	Existing Source After Modification	Existing Source After Expansion	Existing Source After Change of Location	Existing Source After Change of Ownership	Other
F-1	Fermenter Unit #1	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
F-2	Fermenter Unit #2	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
F-3	Fermenter Unit #3	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
F-4	Fermenter Unit #4	☐	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
F-5	Fermenter Unit #5	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Add additional pages if necessary

SECTION D2 – APPLICABLE REGULATIONS

Source ID No.	Applicable Regulations (NSPS/MACT/NESHAP/etc.)
Facility-wide	
F1	40 CFR 63 Subpart CCCC
F2	40 CFR 63 Subpart CCCC
F3	40 CFR 63 Subpart CCCC
F4-F5	40 CFR 63 Subpart CCCC

SECTION E – TOTAL POTENTIAL EMISSIONS

Pollutant	Amount (Tons Per Year)
NO _x	
CO	
PM	

Pollutant	Amount (Tons Per Year)
PM ₁₀ (filterable and condensable)	
PM _{2.5} (filterable and condensable)	
SO ₂	
VOC	259.61
GHG (as CO ₂ e)	
Largest Single HAP	Acetaldehyde - 77.12
Total HAPS	77.12

*If performance test results are available for the unit, submit a copy of test with this application. If manufacturer guarantee is used provide spec sheet.

SECTION F1 – ADDITIONAL FORMS

Indicate which of the following forms are attached and made part of the application	
☐ Air Pollution Control Equipment (SFN 8532)	☐ Fuel Burning Equipment Used for Indirect Heating (SFN 8518)
☐ Construct/Operate Incinerators (SFN 8522)	☒ Hazardous Air Pollutant (HAP) Sources (SFN 8329)
☐ Natural Gas Processing Plants (SFN 11408)	☒ Manufacturing or Processing Equipment (SFN 8520)
☐ Glycol Dehydration Units (SFN 58923)	☐ Volatile Organic Compounds Storage Tank (SFN 8535)
☐ Flares (SFN 59652)	☐ Internal Combustion Engines and Turbines (SFN 8891)
☐ Grain, Feed, and Fertilizer Operations (SFN 8524)	☐ Oil/Gas Production Facility Registration (SFN 14334)

SECTION F2 – OTHER ATTACHMENTS INCLUDED AS PART OF THIS APPLICATION

1. Cover Letter	4. Potential to Emit Calculations
2. Proposed Plot Plan	5. SFN 8520
3. Dakota Yeast Process Flow Chart	6. SFN 8329

I, the undersigned applicant, am fully aware that statements made in this application and the attached exhibits and statements constitute the application for Permit(s) to Construct and/or Operate Air Contaminant sources from the North Dakota Department of Environmental Quality and certify that the information in this application is true, correct and complete to the best of my knowledge and belief. Further, I agree to comply with the provisions of Chapter 23.1-06 of the North Dakota Century Code and all rules and regulations of the Department, or revisions thereof. I also understand the permit is nontransferable and, if granted a permit, I will promptly notify the Department upon sale or legal transfer of this permitted establishment.

Signature 	Date 03/27/2025
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INSTRUCTIONS

SITE PLANS TO BE ATTACHED TO APPLICATION:

Prepare and attach a plot plan drawn to scale or properly dimensioned, showing at least the following:

- a. The property involved and the outlines and heights of all buildings on the property. Identify property lines plainly. Also, indicate if there is a fence around the property that prevents public access.
- b. Location and identification of all existing or proposed equipment, manufacturing processes, etc., and points of emission or discharge of air contaminants to the atmosphere.
- c. Location of the facility or property with respect to the surrounding area, including residences, businesses and other permanent structures, streets and roadways. Identify all such structures and roadways. Indicate direction (**NORTH**) on the drawing and the prevailing wind direction.

EQUIPMENT PLANS AND SPECIFICATIONS FOR PERMIT TO CONSTRUCT:

Supply plans and specifications, including as a minimum an assembly drawing, dimensioned and to scale, in plan, elevation and as many sections as are needed to show clearly the design and operation of the equipment and the means by which air contaminants are controlled.

The following must be shown:

- a. Size and shape of the equipment. Show exterior and interior dimensions and features.
- b. Locations, sizes, and shape details of all features which may affect the production, collection, conveying, or control of air contaminants of any kind, location, size, and shape details concerning all material handling equipment.
- c. All data and calculations used in selecting or designing the equipment.
- d. Horsepower rating of all internal combustion engines driving the equipment.

NOTE: STRUCTURAL DESIGN CALCULATIONS AND DETAILS ARE NOT REQUIRED. WHEN STANDARD COMMERCIAL EQUIPMENT IS TO BE INSTALLED, THE MANUFACTURER'S CATALOG DESCRIBING THE EQUIPMENT MAY BE SUBMITTED IN LIEU OF ITEMS a, b, c, and d OF ABOVE, WHICH THE CATALOG COVERS. ALL INFORMATION REQUIRED ABOVE THAT THE CATALOG DOES NOT CONTAIN MUST BE SUBMITTED BY THE APPLICANT.

ADDITIONAL INFORMATION MAY BE REQUIRED:

If the application is signed by an authorized representative of the owner, a LETTER OF AUTHORIZATION must be attached to the application.

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324
(701) 328-5188



PERMIT APPLICATION FOR MANUFACTURING OR PROCESSING EQUIPMENT
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 8520 (9-2021)

NOTE: READ INSTRUCTIONS BEFORE COMPLETING THIS FORM.
- **Must include SFN 8516 or SFN 52858**

SECTION A – GENERAL INFORMATION

Equipment items operating as a functional unit may be grouped as one application	
Name of Firm or Organization Dakota Yeast, LLC	Facility Name Dakota Yeast, LLC

SECTION B – EQUIPMENT INFORMATION

Source ID Number (From SFN 8516) F5		
Type of Unit or Process (rotary dryer, cupola furnace, crusher, pelletizer, etc.) Fermenter		
Make Owner Constructed	Model NA	Date Installed TBD
Capacity (manufacturer's or designer's guaranteed maximum) 8150 gallons	Operating Capacity (specific units) 6112.5 gallons	
Brief description of operation of unit or process: Yeast Fermentation Process (See Attached Process Flow Chart)		

SECTION C – NORMAL OPERATING SCHEDULE

Hours Per Day 24	Days Per Week 7	Weeks Per Year 52	Peak Production Season (if any)	Dates of Annual Shutdown
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SECTION D – RAW MATERIALS INTRODUCED INTO UNIT OR PROCESS

Include solid fuels such as coke or coal. <i>Exclude</i> indirect heat exchangers from this section For indirect heat exchangers, complete form SFN 8518					
Material	Hourly Process Weight (Pounds Per Hour)			Average Annual (Specify Units)	Intermittent Operation Only (Average Hours Per Week)
	Average	Maximum	Minimum		
Water	615			24.5E06 lb/yr	
Sterilized Mash	370			14.5E06 lb/yr	

SECTION E – PRODUCTS OF UNIT OR PROCESS

Include all, even those not usable because they do not meet specifications					
Material	Hourly Process Weight (Pounds Per Hour)			Average Annual (Specify Units)	Intermittent Operation Only (Average Hours Per Week)
	Average	Maximum	Minimum		
Yeast	1,230			4.9E07 lb/yr	

SECTION F – FUELS USED

Coal (Tons/Yr)	% Sulfur	% Ash	Oil (Gal/Yr)	% Sulfur	Grade No.
Natural Gas (Thousand CF/Yr)	LP Gas (Gal/Yr)			Other (Specify)	

SECTION G – EMISSION POINTS

List each point separately, number each and locate on attached flow chart					
Number	Stack Height (ft)	Stack Diameter (ft at top)	Gas Volume (ACFM)	Exit Temp (°F)	Gas Velocity (fps)
F5	52	2	1131-4901	86-95	6-26

SECTION H – AIR CONTAMINANTS EMITTED

Known or Suspected - Use same identification number as above				
Number	Pollutant	Amount		Basis of Estimate
		Pounds/Hr	Tons/Yr	
F5	VOC, Acetaldehyde	(See PTE Calcs)	(See PTE Calcs)	February 2024 Stack Test

SECTION I – VOLATILE ORGANIC COMPOUNDS

Are any volatile organic compounds (VOCs) stored on premises? See 40 CFR 51.100(s) for classes of compounds covered			☒ No	☐ Yes – List Below
Material Stored	Size Tank (Gallons)	Vapor Control Device		

SECTION J – ORGANIC SOLVENTSAre any organic solvents used or produced? ☒ No (None or less than 50 gal/yr) ☐ Yes – List Below

Type	Principal Use	Gallons/Yr Consumed	Gallons/Yr Produced

SECTION K – AIR POLLUTION CONTROL EQUIPMENTIs any air pollution control equipment installed on this unit or process? ☒ No ☐ Yes

If 'Yes' attach form SFN 8532

SECTION L – MATERIAL STORAGEDoes the input material or product from this process contain finely divided material which could become airborne? ☒ No ☐ Yes

Describe storage methods used:

Storage Piles	Type of Material	Particle Diameter (Avg. or Screen Size)	Pile Size Average Tons	Pile Wetted	Pile Covered

Describe any fugitive dust problems:

Attach additional sheets if needed to explain any answers. Use separate form for each contaminant emitting process

SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Environmental Quality
 Division of Air Quality
 4201 Normandy Street, 2nd Floor
 Bismarck, ND 58503-1324
 (701)328-5188



PERMIT APPLICATION FOR HAZARDOUS AIR POLLUTANT (HAP) SOURCES
NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR QUALITY
SFN 8329 (9-2021)

SECTION A1 - APPLICANT INFORMATION

Name of Firm or Organization Dakota Yeast, LLC		
Applicant's Name Christopher Ashworth		
Title Plant Manager	Telephone Number (701) 672-4210	E-mail Address cashworth@lallemand.com
Mailing Address (Street & No.) 18175 Red River Road West		
City Wahpeton	State ND	ZIP Code 58075

SECTION A2 - FACILITY INFORMATION

Contact Person for Air Pollution Matters Christopher Ashworth		
Title Plant Manager	Telephone Number (701) 672-4210	E-mail Address cashworth@lallemand.com
Facility Address (Street & No. or Lat/Long to Nearest Second) 18175 Red River Road West		
City Wahpeton	State ND	ZIP Code 58075
County Richland	Number of Employees at Location 26	
Land Area at Plant Site 10 Acres (or)	Sq. Ft.	MSL Elevation at Plant 1130.2

Describe Nature of Business/Process Production of Bakers and Specialty Yeast

SECTION B – STACK DATA

Inside Diameter (ft) 2	Height Above Grade (ft) 52	
Gas Temperature at Exit (°F) 86-95	Gas Velocity at Exit (ft/sec) 6-26	Gas Volume (scfm) (See PTE Calculations)
Basis of any Estimates (attach separate sheet if necessary) February 2024 Stack Test		
Are Emission Control Devices in Place? If YES – Complete SFN 8532 ☐ Yes ☒ No		
Nearest Residences or Building	Distance (ft) 150	Direction North-East
Nearest Property Line 75th St SE	Distance (ft) 210	Direction South

SECTION C – EMISSION STREAM DATA

Source ID Number SFN 8516 F1, F2, F3, F4, F5	Mean Particle Diameter (um)
Flow Rate (scfm)	Drift Velocity (ft/sec)
Stream Temperature (°F) 86-95	Particulate Concentration (gr/dscf)
Moisture Content (%)	Halogens or Metals Present?
Pressure (in. Hg)	Organic Content (ppmv)
Heat Content (Btu/scfm)	O ₂ Content (%)

SECTION D – POLLUTANT SPECIFIC DATA**(Complete One Box for Each Pollutant in Emission Stream)**

Pollutant Emitted VOC (Ethanol)	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) 17.25 (F1-F3), 3.76 (F4-F5)	Emission Source (describe) Fermenter producing Bakers/Specialty yeast
Source Classification (process point, process fugitive, area fugitive) process point	Pollutant Class and Form (organic/inorganic - particulate/vapor) organic-vapor
Concentration in Emission Stream (ppmv)	Vapor Pressure (in. Hg @ °F)
Solubility	Molecular Weight (lb/lb-mole)
Absorptive Properties	

Pollutant Emitted Acetaldehyde	Chemical Abstract Services (CAS) Number
Proposed Emission Rate (lb/hr) 5.42 (F1-F3), 0.68 (F4-F5)	Emission Source (describe) Fermenter producing Bakers/Specialty yeast
Source Classification (process point, process fugitive, area fugitive) process point	Pollutant Class and Form (organic/inorganic - particulate/vapor) organic-vapor
Concentration in Emission Stream (ppmv)	Vapor Pressure (in. Hg @ °F)
Solubility	Molecular Weight (lb/lb-mole)
Absorptive Properties	

(Add additional pages if necessary)

Signature of Applicant 	Date 03/27/2025
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SEND COMPLETED APPLICATION AND ALL ATTACHMENTS TO:

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324
(701) 328-5188

Facility-Wide - Source Summary
Dakota Yeast
Wahpeton, ND

Criteria Pollutant and HAP PTE Summary (ton/year)

Emission Unit(s)	Emission Point	VOC (tpy)	Acetaldehyde (tpy)
Fermenter Unit #1	F1	75.56	23.72
Fermenter Unit #2	F2	75.56	23.72
Fermenter Unit #3	F3	75.56	23.72
Fermenter Unit #4	F4	16.47	2.97
Fermenter Unit #5	F5	16.47	2.97
Facility Wide Totals		259.61	77.12
Proposed Synthetic Minor Limit		240.00	

Criteria Pollutant and HAP Expected Actual Emissions Summary (ton/year)

Emission Unit(s)	Emission Point	VOC (tpy)	Acetaldehyde (tpy)
Fermenter Unit #1	F1	40.66	5.84
Fermenter Unit #2	F2	45.85	14.40
Fermenter Unit #3	F3	16.29	2.32
Fermenter Unit #4	F4	10.00	1.80
Fermenter Unit #5	F5	10.00	1.80
Facility Wide Totals		122.79	26.17

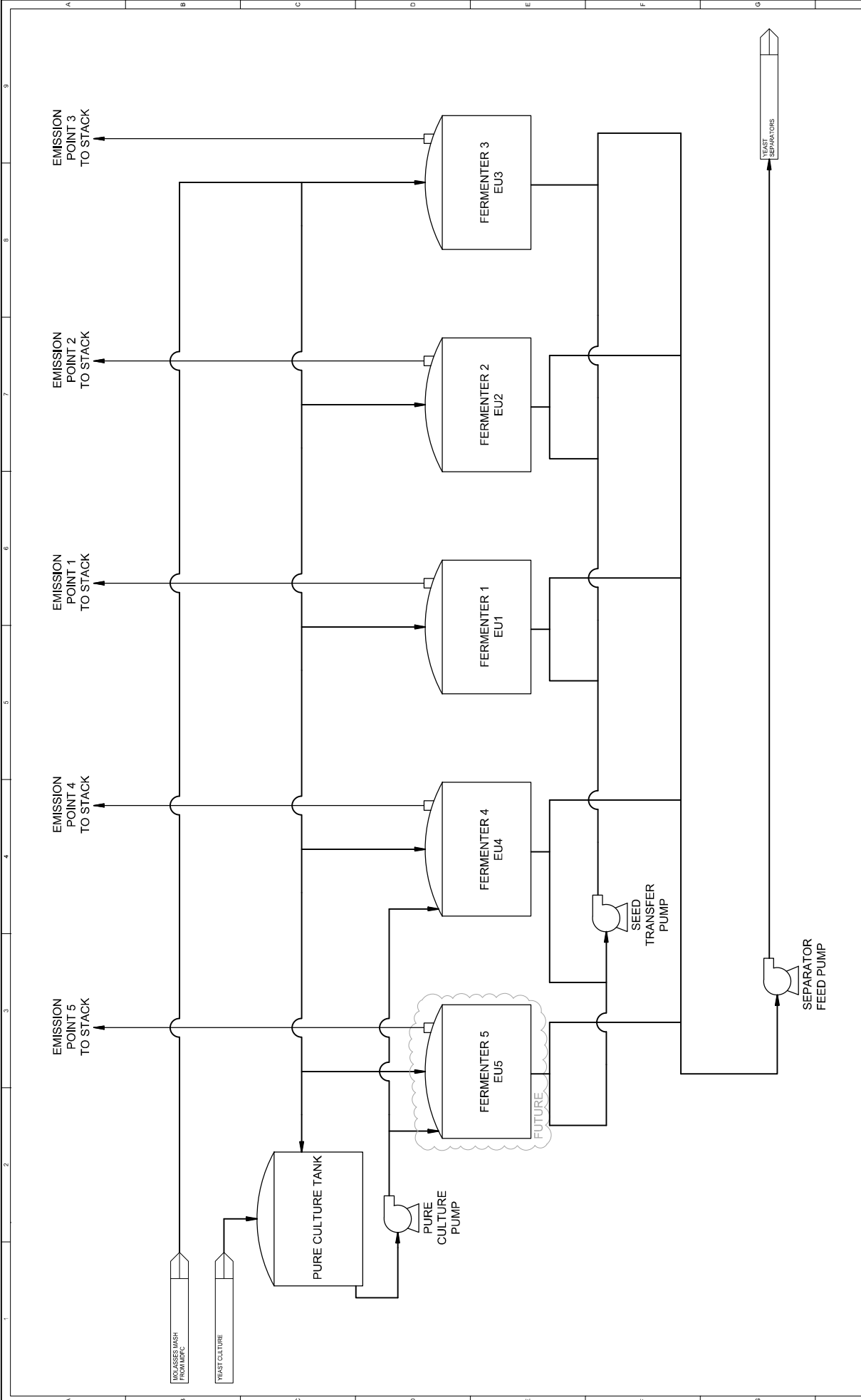
Fermenter Emissions
Dakota Yeast
Wahpeton, ND

Potential-to-Emit Calculations F1-F5

Pollutant	Emission Unit	Emission Rate ⁽¹⁾ (lb/hr)	Operating Hours	Potential Emissions (tpy)
VOC	F1	17.25	8,760	75.56
VOC	F2	17.25		75.56
VOC	F3	17.25		75.56
VOC	F4	3.76		16.47
VOC	F5	3.76		16.47
Acetaldehyde	F1	5.42		23.72
Acetaldehyde	F2	5.42		23.72
Acetaldehyde	F3	5.42		23.72
Acetaldehyde	F4	0.68		2.97
Acetaldehyde	F5	0.68		2.97
¹ VOC and Acetaldehyde rates derived from the most recent stack test, conservatively extrapolated to 110% of the test results.				

Expected Actual Calculations F1-F5

Pollutant	Emission Unit	Emission Rate ⁽¹⁾ (lb/hr)	Operating Hours ⁽²⁾	Potential Emissions (tpy)
VOC	F1	13.3	6,114	40.66
VOC	F2	15.0		45.85
VOC	F3	5.33		16.29
VOC	F4	3.27		10.00
VOC	F5	3.27		10.00
Acetaldehyde	F1	1.91		5.84
Acetaldehyde	F2	4.71		14.40
Acetaldehyde	F3	0.76		2.32
Acetaldehyde	F4	0.59		1.80
Acetaldehyde	F5	0.59		1.80
¹ VOC and Acetaldehyde are derived from the most recent stack test (February 2024)				
² Operating hours assumes a removal of minimum 7.25 hours/day for 365 days to account for time in which active fermentation steps do not occur (empty cream yeast, separation of the yeast solids, CIP the fermenter, and refill time)				



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This content is from the eCFR and is authoritative but unofficial.

Title 40 —Protection of Environment

Chapter I —Environmental Protection Agency

Subchapter C —Air Programs

Part 63 —National Emission Standards for Hazardous Air Pollutants for Source Categories

Authority: 42 U.S.C. 7401 *et seq.*

Source: 57 FR 61992, Dec. 29, 1992, unless otherwise noted.

Subpart CCCC National Emission Standards for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast

What This Subpart Covers

- § 63.2130 What is the purpose of this subpart?
- § 63.2131 Am I subject to this subpart?
- § 63.2132 What parts of my plant does this subpart cover?
- § 63.2133 When do I have to comply with this subpart?

Emission Limitations

- § 63.2140 What emission limitations must I meet?

General Compliance Requirements

- § 63.2150 What are my general requirements for complying with this subpart?

Testing and Initial Compliance Requirements

- § 63.2160 By what date must I conduct an initial compliance demonstration?
- § 63.2161 What performance tests and other procedures must I use if I monitor brew ethanol?
- § 63.2162 When must I conduct subsequent performance tests if I monitor brew ethanol?
- § 63.2163 If I monitor fermenter exhaust, what are my monitoring installation, operation, and maintenance requirements?
- § 63.2164 If I monitor brew ethanol, what are my monitoring installation, operation, and maintenance requirements?
- § 63.2165 How do I demonstrate initial compliance with the emission limitations if I monitor fermenter exhaust?

Continuous Compliance Requirements

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Table 1 to Subpart CCCC of Part 63

Emission Limitations

Table 2 to Subpart CCCC of Part 63

Requirements for Performance Tests If You Monitor Brew
Ethanol

Table 3 to Subpart CCCC of Part 63

Initial Compliance With Emission Limitations

Table 4 to Subpart CCCC of Part 63

Continuous Compliance With Emission Limitations

Table 5 to Subpart CCCC of Part 63

Requirements for Reports

Table 6 to Subpart CCCC of Part 63

Applicability of General Provisions to Subpart CCCC

Table 7 to Subpart CCCC of Part 63

Emission Limitation Applicability Timeline

Table 8 to Subpart CCCC of Part 63

Monitoring System Requirements Timeline

Subpart CCCC—National Emission Standards for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast

Source: 82 FR 48178, Oct. 16, 2017, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.2130 What is the purpose of this subpart?

This subpart establishes national emission limitations for hazardous air pollutants (HAP) emitted from manufacturers of nutritional yeast. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.2131 Am I subject to this subpart?

- (a) You are subject to this subpart if you own or operate a nutritional yeast manufacturing facility that is, is located at, or is part of a major source of HAP emissions.

- (1) A manufacturer of nutritional yeast is a facility that makes yeast for the purpose of becoming an ingredient in dough for bread or any other yeast-raised baked product, or for becoming a nutritional food additive intended for consumption by humans. A manufacturer of nutritional yeast does not include production of yeast intended for consumption by animals, such as an additive for livestock feed.
- (2) A major source of HAP emissions is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

(b) [Reserved]

§ 63.2132 What parts of my plant does this subpart cover?

- (a) This subpart applies to each new, reconstructed, or existing “affected source” that produces *Saccharomyces cerevisiae* at a nutritional yeast manufacturing facility.
- (b) The affected source is the collection of equipment used in the manufacture of the nutritional yeast species *Saccharomyces cerevisiae*. This collection of equipment includes fermentation vessels (fermenters), as described in paragraph (c) of this section. The collection of equipment used in the manufacture of the nutritional yeast species *Candida utilis* (torula yeast) is not part of the affected source.
- (c) The emission limitations in this subpart apply to fermenters in the affected source that meet all of the criteria listed in paragraphs (c)(1) and (2) of this section.
 - (1) The fermenters are “fed-batch” as defined in § 63.2192.
 - (2) The fermenters are used to support one of the last three fermentation stages in a production run (i.e., third-to-last stage, second-to-last stage, and last stage), which may be referred to as “stock, first generation, and trade,” “seed, semi-seed, and commercial,” or “CB4, CB5, and CB6” stages.
- (d) The emission limitations in this subpart do not apply to flask, pure-culture, yeasting-tank, or any other set-batch (as defined in § 63.2192) fermentation, and they do not apply to any operations after the last dewatering operation, such as filtration.
- (e) The emission limitations in Table 1 to this subpart do not apply to fermenters during the production of specialty yeast (defined in § 63.2192).
- (f) An affected source is a “new affected source” if you commenced construction of the affected source after October 19, 1998, and you met the applicability criteria in § 63.2131 at the time you commenced construction.
- (g) An affected source is “reconstructed” if it meets the criteria for reconstruction as defined in § 63.2.
- (h) An affected source is “existing” if it is not new or reconstructed.

§ 63.2133 When do I have to comply with this subpart?

- (a) If you have a new or reconstructed affected source, then you must comply with paragraph (a)(1) or (2) of this section.
 - (1) If you start up your affected source before May 21, 2001, then you must comply with this subpart no later than May 21, 2001.

- (2) If you start up your affected source on or after May 21, 2001, then you must comply with this subpart upon startup of your affected source.
- (b) If you have an existing affected source, then you must comply with this subpart no later than May 21, 2004.
- (c) If you have an area source that increases its emissions, or its potential to emit, so that it becomes a major source of HAP, then paragraphs (c)(1) and (2) of this section apply.
 - (1) Any portion of the existing facility that is a new affected source or a new reconstructed source must be in compliance with this subpart upon startup.
 - (2) All other parts of the affected source must be in compliance with this subpart by no later than 1 year after it becomes a major source.
- (d) You must meet the notification requirements in § 63.2180 according to the schedule in § 63.2180 and in subpart A of this part.

EMISSION LIMITATIONS

§ 63.2140 What emission limitations must I meet?

You must meet the applicable emission limitations in Table 1 to this subpart, according to the timeline provided in Table 7 to this subpart.

GENERAL COMPLIANCE REQUIREMENTS

§ 63.2150 What are my general requirements for complying with this subpart?

- (a) You must be in compliance with the applicable emission limitations in Table 1 to this subpart at all times, and demonstrate compliance according to paragraphs (a)(1) through (3) of this section.
 - (1) To demonstrate compliance with emission limitations by using the 98-Percent Option, you must follow the procedures of § 63.2171(b).
 - (2) To demonstrate compliance with emission limitations by using the Average Option, you must follow the procedures of § 63.2171(c).
 - (3) To demonstrate compliance with emission limitations by using the Batch Option, you must follow the procedures of § 63.2171(d).
- (b) You must monitor VOC concentration continuously for each batch by using the applicable monitoring method in Table 8 to this subpart.
- (c) If the date upon which you must demonstrate initial compliance as specified in § 63.2160 falls after the compliance date specified for your affected source in § 63.2133, then you must maintain a log detailing the operation and maintenance of the continuous emission monitoring systems and the process and emissions control equipment during the period between those dates.
- (d) At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved.

Determination of whether an affected source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the affected source.

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

§ 63.2160 By what date must I conduct an initial compliance demonstration?

- (a) For each emission limitation in Table 1 to this subpart for which you demonstrate compliance using the Average Option, you must demonstrate initial compliance for the period ending on the last day of the month that is 12 calendar months (or 11 calendar months, if the compliance date for your affected source is the first day of the month) after the compliance date that is specified for your affected source in § 63.2133.
- (b) For each emission limitation in Table 1 to this subpart for which you demonstrate compliance using the Batch Option, you must demonstrate initial compliance for the period ending June 30 or December 31 (use whichever date is the first date following the compliance date that is specified for your affected source in § 63.2133).

§ 63.2161 What performance tests and other procedures must I use if I monitor brew ethanol?

- (a) You must conduct each performance test in Table 2 to this subpart that applies to you, as specified in paragraphs (b) through (f) of this section.
- (b) You must conduct performance tests under such conditions as the Administrator specifies, based on representative performance of the affected source for the period being tested, and under the specific conditions that this subpart specifies in Table 2 to this subpart and in paragraphs (b)(1) through (4) of this section. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
 - (1) You must conduct each performance test concurrently with brew ethanol monitoring to establish a brew-to-exhaust correlation as specified in paragraph (e) of this section.
 - (2) For each fermentation stage, you must conduct one run of the EPA Test Method 25A of 40 CFR part 60, appendix A-7, over the entire length of a batch. The three fermentation stages do not have to be from the same production run.
 - (3) You must obtain your test sample at a point in the exhaust-gas stream before you inject any dilution air. For fermenters, dilution air is any air not needed to control fermentation.
 - (4) You must record the results of the test for each fermentation stage.
- (c) You may not conduct performance tests during periods of malfunction.
- (d) You must collect data to correlate the brew ethanol concentration to the VOC concentration in the fermenter exhaust according to paragraphs (d)(1) through (3) of this section.
 - (1) You must collect a separate set of brew ethanol concentration data for each fed-batch fermentation stage while manufacturing the product that constitutes the largest percentage (by mass) of average annual production.

- (2) You must measure brew ethanol as specified in § 63.2164 concurrently with conducting a performance test for VOC in fermenter exhaust as specified in paragraph (b) of this section. You must measure brew ethanol at least once during each successive 30-minute period over the entire period of the performance test for VOC in fermenter exhaust.
- (3) You must keep a record of the brew ethanol concentration data for each fermentation stage over the period of EPA Test Method 25A of 40 CFR part 60, appendix A–7, performance test.
- (e) For each set of data that you collected under paragraphs (b) and (d) of this section, you must perform a linear regression of brew ethanol concentration (percent) on VOC fermenter exhaust concentration (parts per million by volume (ppmv) measured as propane). You must ensure the correlation between the brew ethanol concentration, as measured by the brew ethanol monitor, and the VOC fermenter exhaust concentration, as measured by EPA Test Method 25A of 40 CFR part 60, appendix A–7, is linear with a correlation coefficient of at least 0.90.
- (f) You must calculate the VOC concentration in the fermenter exhaust for each batch using the brew ethanol concentration data according to Equation 1 of this section, and using the constants (CF and y) calculated by the applicable linear regression performed under paragraph (e) of this section.

$$BAVOC = BAE * CF + y \quad (Eq. 1)$$

Where:

BAVOC = Batch-average concentration of VOC in fermenter exhaust (ppmv measured as propane), calculated for compliance demonstration

BAE = Batch-average concentration of brew ethanol in fermenter liquid (percent), measured by the brew ethanol monitor

CF = Constant established at performance test and representing the slope of the regression line

y = Constant established at performance test and representing the y-intercept of the regression line

§ 63.2162 When must I conduct subsequent performance tests if I monitor brew ethanol?

- (a) For each emission limitation in Table 1 to this subpart for which compliance is demonstrated by monitoring brew ethanol concentration and calculating VOC concentration in the fermenter exhaust according to the procedures in § 63.2161, you must conduct an EPA Test Method 25A of 40 CFR part 60, appendix A–7, performance test and establish a brew-to-exhaust correlation according to the procedures in Table 2 to this subpart and in § 63.2161, at least once every year.
- (b) The first subsequent performance test must be conducted no later than 365 calendar days after the initial performance test conducted according to § 63.2160. Each subsequent performance test must be conducted no later than 365 calendar days after the previous performance test. You must conduct a performance test for each 365 calendar day period during which you demonstrate compliance using the brew ethanol correlation developed according to § 63.2161.

§ 63.2163 If I monitor fermenter exhaust, what are my monitoring installation, operation, and maintenance requirements?

- (a) You must install and certify a CEMS that generates a single combined response value for VOC concentration (VOC CEMS) according to the procedures and requirements in Performance Specification 8—Performance Specifications for Volatile Organic Compound Continuous Emission Monitoring Systems in Stationary Sources in appendix B to part 60 of this chapter.
- (b) You must operate and maintain your VOC CEMS according to the procedures and requirements in Procedure 1—Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems Used for Compliance Determination in appendix F to part 60 of this chapter, except with regard to provisions concerning relative accuracy test audit (RATA), cylinder gas audit (CGA), and relative accuracy audit (RAA) frequencies; out of control period definition; and CEMS data status during out of control periods; which are instead specified in this paragraph for frequencies; and § 63.8(c)(7) for the definition of and status of CEMS data during out of control periods.
 - (1) You must conduct a RATA at least once every 12 calendar quarters, in accordance with sections 8 and 11, as applicable, of Performance Specification 8.
 - (2) You must conduct a CGA or RAA in the calendar quarters during which a RATA is not conducted, but in no more than 11 quarters in succession.
 - (3) As necessary, rather than relying on citation 2 of Procedure 1 of appendix F to 40 CFR part 60, you must rely on EPA/600/R-12/531 (incorporated by reference, see § 63.14).
 - (4) Your affected source must meet the criteria of Performance Specification 8, section 13.2.
- (c) You must use Method 25A in appendix A-7 to part 60 of this chapter as the Reference Method.
- (d) You must calibrate your VOC CEMS with propane.
- (e) You must set your VOC CEMS span at less than 5 times the relevant VOC emission limitation given in Table 1 of this subpart. Note that the EPA considers 1.5 to 2.5 times the relevant VOC emission limitation to be the optimum range, in general.
- (f) You must complete the performance evaluation and submit the performance evaluation report before the compliance date that is specified for your affected source in § 63.2133.
- (g) You must monitor VOC concentration in fermenter exhaust at any point prior to dilution of the exhaust stream.
- (h) You must collect data using the VOC CEMS at all times during each batch monitoring period, except for periods of monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance.
- (i) For each CEMS, you must record the results of each inspection, calibration, and validation check.
- (j) You must check the zero (low-level) and high-level calibration drifts for each CEMS in accordance with the applicable Performance Specification of 40 CFR part 60, appendix B. You must adjust the zero (low-level) and high-level calibration drifts, at a minimum, whenever the zero (low-level) drift exceeds 2 times the limits of the applicable Performance Specification. You must perform the calibration drift checks at least once daily except under the conditions of paragraphs (j)(1) through (3) of this section.

- (1) If a 24-hour calibration drift check for your CEMS is performed immediately prior to, or at the start of, a batch monitoring period of a duration exceeding 24 hours, then you are not required to perform 24-hour-interval calibration drift checks during that batch monitoring period.
- (2) If the 24-hour calibration drift exceeds 2.5 percent of the span value in fewer than 5 percent of the checks over a 1-month period, and the 24-hour calibration drift never exceeds 7.5 percent of the span value, then you may reduce the frequency of calibration drift checks to at least weekly (once every 7 days).
- (3) If, during two consecutive weekly checks, the weekly calibration drift exceeds 5 percent of the span value, then you must resume a frequency of at least 24-hour interval calibration checks until the 24-hour calibration checks meet the test of paragraph (j)(2) of this section.

§ 63.2164 If I monitor brew ethanol, what are my monitoring installation, operation, and maintenance requirements?

- (a) You must install, operate, and maintain each brew ethanol monitor according to the manufacturer's specifications and in accordance with § 63.2150(d).
- (b) Each of your brew ethanol monitors must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 30-minute period within each batch monitoring period. Except as specified in paragraph (c) of this section, you must have a minimum of two cycles of operation in a 1-hour period to have a valid hour of data.
- (c) You must reduce the brew ethanol monitor data to arithmetic batch averages computed from two or more data points over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of this part are being performed. During these periods, a valid hour of data must consist of at least one data point representing a 30-minute period.
- (d) You must have valid brew ethanol monitor data from all operating hours over the entire batch monitoring period.
- (e) You must set the brew ethanol monitor span to correspond to not greater than 5 times the relevant emission limitation; note that we consider 1.5 to 2.5 times the relevant emission limitation to be the optimum range, in general. You must use the brew-to-exhaust correlation equation established under § 63.2161(f) to determine the span value for your brew ethanol monitor that corresponds to the relevant emission limitation.
- (f) For each brew ethanol monitor, you must record the results of each inspection, calibration, and validation check.
- (g) The gas chromatograph (GC) that you use to calibrate your brew ethanol monitor must meet the requirements of paragraphs (g)(1) through (3) of this section.
 - (1) You must calibrate the GC at least daily, by analyzing standard solutions of ethanol in water (0.05 percent, 0.15 percent, and 0.3 percent).
 - (2) For use in calibrating the GC, you must prepare the standard solutions of ethanol using the procedures listed in paragraphs (g)(2)(i) through (vi) of this section.
 - (i) Starting with 100-percent ethanol, you must dry the ethanol by adding a small amount of anhydrous magnesium sulfate (granular) to 15–20 milliliters (ml) of ethanol.

- (ii) You must place approximately 50 ml of water into a 100-ml volumetric flask and place the flask on a balance. You must tare the balance. You must weigh 2.3670 grams of the dry (anhydrous) ethanol into the volumetric flask.
- (iii) You must add the 100-ml volumetric flask contents to a 1000-ml volumetric flask. You must rinse the 100-ml volumetric flask with water into the 1000-ml flask. You must bring the volume to 1000 ml with water.
- (iv) You must place an aliquot into a sample bottle labeled "0.3% Ethanol."
- (v) You must fill a 50-ml volumetric flask from the contents of the 1000-ml flask. You must add the contents of the 50-ml volumetric flask to a 100-ml volumetric flask and rinse the 50-ml flask into the 100-ml flask with water. You must bring the volume to 100 ml with water. You must place the contents into a sample bottle labeled "0.15% Ethanol."
- (vi) With a 10-ml volumetric pipette, you must add two 10.0-ml volumes of water to a sample bottle labeled "0.05% Ethanol." With a 10.0-ml volumetric pipette, you must pipette 10.0 ml of the 0.15 percent ethanol solution into the sample bottle labeled "0.05% Ethanol."
- (3) For use in calibrating the GC, you must dispense samples of the standard solutions of ethanol in water in aliquots to appropriately labeled and dated glass sample bottles fitted with caps having a Teflon® seal. You may keep refrigerated samples unopened for 1 month. You must prepare new calibration standards of ethanol in water at least monthly.
- (h) You must calibrate the brew ethanol monitor according to paragraphs (h)(1) through (3) of this section.
 - (1) To calibrate the brew ethanol monitor, you must inject a brew sample into a calibrated GC and compare the simultaneous ethanol value given by the brew ethanol monitor to that given by the GC. You must use either the Porapak® Q, 80–100 mesh, 6' x 1/8", stainless steel packed column; or the DB Wax, 0.53 millimeter x 30 meter capillary column.
 - (2) If a brew ethanol monitor value for ethanol differs by 20 percent or more from the corresponding GC ethanol value, you must determine the brew ethanol values throughout the rest of the batch monitoring period by injecting brew samples into the GC not less frequently than once every 30 minutes. From the time at which you detect a difference of 20 percent or more until the batch monitoring period ends, the GC data will serve as the brew ethanol monitor data.
 - (3) You must perform a calibration of the brew ethanol monitor at least four times per batch.

§ 63.2165 How do I demonstrate initial compliance with the emission limitations if I monitor fermenter exhaust?

- (a) You must demonstrate initial compliance with each emission limitation in Table 1 to this subpart that applies to you according to the methods in Table 3 to this subpart.
- (b) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.2180(f).

CONTINUOUS COMPLIANCE REQUIREMENTS

§ 63.2170 How do I monitor and collect data to demonstrate continuous compliance?

- (a) You must monitor and collect data according to this section and § 63.2163 or § 63.2164.

- (b) Except for periods of monitoring system malfunctions, required monitoring system quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance, you must collect data using the CEMS or brew ethanol monitor, as applicable, at all times during each batch monitoring period.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or quality control activities in data averages and calculations used to report emission or operating levels, or to fulfill a data collection requirement. You must use all the data collected during all other periods in assessing the operation of the control system.
- (d) Any hour during the batch monitoring period for which quality-assured VOC CEMS data or brew ethanol monitor data, as applicable, are not obtained is a deviation from monitoring requirements and is counted as an hour of monitoring system downtime.

§ 63.2171 How do I demonstrate continuous compliance with the emission limitations?

- (a) You must demonstrate continuous compliance with each emission limitation in Table 1 to this subpart that applies to you according to the methods specified in Table 4 to this subpart and the applicable procedures of this section.
- (b) To demonstrate compliance with emission limitations by using the 98-Percent Option, you must calculate the percentage of within-concentration batches (as defined in § 63.2192) for each 12-month calculation period by following the procedures in this paragraph and paragraphs (e)(1) and (2) of this section. At the end of each calendar month, you must determine the percentage of batches that were in compliance with the applicable maximum concentration in the 12-month calculation period. The total number of batches in the calculation period is the sum of the numbers of batches of each fermentation stage for which emission limitations apply. To determine which batches are in the 12-month calculation period, you must include those batches for which the batch monitoring period ended at or after midnight on the first day of the period and exclude those batches for which the batch monitoring period did not end before midnight on the last day of the period.
- (c) To demonstrate compliance with emission limitations by using the Average Option, you must follow the procedures in this paragraph and paragraphs (e)(1) and (2) of this section. At the end of each calendar month, you must determine the average VOC concentration from all batches in each fermentation stage in a 12-month calculation period. To determine which batches are in a 12-month calculation period, you must include those batches for which the batch monitoring period ended at or after midnight on the first day of the period and exclude those batches for which the batch monitoring period did not end before midnight on the last day of the period.
- (d) To demonstrate compliance with emission limitations by using the Batch Option, you must determine the average VOC concentration in the fermenter exhaust for each batch of each fermentation stage in a semiannual reporting period (*i.e.*, January 1 through June 30 or July 1 through December 31). To determine which batches are in the semiannual reporting period, you must include those batches for which the batch monitoring period ended at or after midnight on the first day of the period and exclude those batches for which the batch monitoring period did not end before midnight on the last day of the period.
- (e) To demonstrate compliance with an emission limitation using a 12-month calculation period, you must follow the procedures in paragraphs (e)(1) and (2) of this section.

- (1) The first 12-month calculation period begins on the compliance date that is specified for your affected source in § 63.2133 and ends on the last day of the month that includes the date 1 year after your compliance date, unless the compliance date for your affected source is the first day of the month, in which case the first 12-month calculation period ends on the last day of the month that is 11 calendar months after the compliance date.
- (2) The second 12-month calculation period and each subsequent 12-month calculation period begins on the first day of the month following the first full month of the previous 12-month calculation period and ends on the last day of the month 11 calendar months later.

NOTIFICATION, REPORTS, AND RECORDS

§ 63.2180 What notifications must I submit and when?

- (a) You must submit all of the notifications in §§ 63.7(b) and (c); 63.8(e), (f)(4) and (6); and 63.9(b) through (h) that apply to you by the dates specified.
- (b) If you start up your affected source before May 21, 2001, you are not subject to the initial notification requirements of § 63.9(b)(2).
- (c) If you are required to conduct a performance test as specified in § 63.2161 to this subpart, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in § 63.7(b)(1).
- (d) If you are required to conduct a performance evaluation as specified in § 63.2163, you must submit a notification of the date of the performance evaluation at least 60 days prior to the date the performance evaluation is scheduled to begin as required in § 63.8(e)(2).
- (e) If you are required to conduct a performance test as specified in Table 2 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).
- (f) For each initial compliance demonstration required in Table 3 to this subpart, you must submit the Notification of Compliance Status no later than July 31 or January 31, whichever date follows the initial compliance period that is specified for your affected source in § 63.2160(a) or (b). The first compliance report, described in § 63.2181(b)(1), serves as the Notification of Compliance Status.

§ 63.2181 What reports must I submit and when?

- (a) You must submit each report in Table 5 to this subpart that applies to you.
 - (1) On and after October 16, 2017, you must also comply with reporting for performance tests or for performance evaluations as specified in paragraphs (a)(1)(i) and (ii) of this section.
 - (i) Within 60 days after the date of completing each performance test as required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (a)(1)(i)(A) through (C) of this section.
 - (A) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange

(CDX) (<https://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site.

- (B) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in § 63.13, unless the Administrator agrees to or specifies an alternate reporting method.
- (C) If you claim that some of the performance test information being submitted under paragraph (a)(1)(i)(A) of this section is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (a)(1)(i)(A) of this section.

(ii) Within 60 days after the date of completing each continuous monitoring system performance evaluation (as defined in § 63.2), you must submit the results of the performance evaluation following the procedures specified in paragraphs (a)(1)(ii)(A) through (C) of this section.

- (A) For performance evaluations of continuous monitoring systems measuring RATA pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site.
- (B) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in § 63.13, unless the Administrator agrees to or specifies an alternate reporting method.
- (C) If you claim that some of the performance evaluation information being submitted is CBI, then you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report according to the schedule in Table 5 to this subpart and according to paragraphs (b)(1) through (5) of this section.

- (1) The first compliance report must include the information specified in paragraph (c) of this section. If you are demonstrating compliance with an emission limitation using a 12-month calculation period (e.g., the Average Option), then the first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.2133 and ending on either June 30 or December 31 (use whichever date is the first date following the end of the first 12 calendar months after the compliance date that is specified for your affected source in § 63.2133). If you are demonstrating compliance with an emission limitation using the Batch Option, then the first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.2133 and ending on either June 30 or December 31 (use whichever date is the first date following the compliance date that is specified for your affected source in § 63.2133).
 - (2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first compliance reporting period specified in paragraph (b)(1) of this section.
 - (3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each subsequent compliance report must include the information specified in paragraph (c) of this section.
 - (4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
 - (5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.
- (c) The compliance report must contain the information listed in paragraphs (c)(1) through (8) of this section.
- (1) Company name and address.
 - (2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - (3) Date of report and beginning and ending dates of the reporting period.
 - (4) For each 12-month calculation period ending on a calendar month that falls within a reporting period for which you are using the 98-Percent Option to comply, the percentage of batches that are within-concentration batches.
 - (5) For each 12-month calculation period ending on a calendar month that falls within a reporting period for which you are using the 98-Percent Option to comply and your affected source fails to meet an applicable standard, the information for each batch for which BAVOC exceeded the applicable maximum VOC concentration in Table 1 to this subpart and whether the batch was in production during a period of malfunction or during another period.
 - (6) For each 12-month calculation period ending on a calendar month that falls within a reporting period for which you are using the Average Option to comply or for any reporting period for which you are using the Batch Option to comply, and your affected source meets an applicable standard, the information in paragraph (c)(6)(i) or (ii) of this section, depending on the compliance option selected from Table 1 to this subpart.

- (i) If you are using the Average Option to comply, the average BAVOC of all batches in each fermentation stage for each 12-month calculation period ending on a calendar month that falls within the reporting period that did not exceed the applicable emission limitation.
 - (ii) If you are using the Batch Option to comply, a certification that BAVOC for each batch manufactured during the reporting period did not exceed applicable emission limitations.
- (7) For each 12-month calculation period ending on a calendar month that falls within a reporting period for which you are using the Average Option to comply or for any reporting period for which you are using the Batch Option to comply and your affected source fails to meet an applicable standard, the information in paragraph (c)(7)(i) or (ii) of this section, depending on the compliance option selected from Table 1 to this subpart.
 - (i) If you are using the Average Option to comply, the average BAVOC of all batches in each fermentation stage for each 12-month calculation period that failed to meet the applicable standard; the fermenters that operated in each fermentation stage that failed to meet the applicable standard; the duration of each failure; an estimate of the quantity of VOC emitted over the emission limitation; a description of the method used to estimate the emissions; and the actions taken to minimize emissions and correct the failure.
 - (ii) If you are using the Batch Option to comply, the fermenters and batches that failed to meet the applicable standard; the date, time, and duration of each failure; an estimate of the quantity of VOC emitted over the emission limitation; a description of the method used to estimate the emissions; and the actions taken to minimize emissions and correct the failure.
- (8) The total operating hours for each fermenter, the total hours of monitoring system operation for each CEMS or brew ethanol monitor, and the total hours of monitoring system downtime for each CEMS or brew ethanol monitor.

§ 63.2182 What records must I keep?

- (a) You must keep the records listed in paragraphs (a)(1) through (3) of this section.
 - (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Notification of Compliance Status and compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).
 - (2) Records of failures to meet a standard, specified in § 63.2181(c)(5) and (7).
 - (3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii) and (ix).
- (b) For each affected source that monitors brew ethanol, you must keep records demonstrating the calculation of the brew-to-exhaust correlations specified in § 63.2161.
- (c) For each CEMS and brew ethanol monitor, you must keep the records listed in paragraphs (c)(1) through (5) of this section.
 - (1) Records described in § 63.10(b)(2)(vi), (vii), (x), and (xi). The CEMS must allow the amount of excess zero (low-level) and high-level calibration drift measured at the interval checks to be quantified and recorded.
 - (2) Records described in § 63.10(c)(1) through (6).

- (3) Records of the quality control program as specified in § 63.8(d), including the program of corrective action; the current version of the performance evaluation test plan, as specified in § 63.8(e)(3); and previous (*i.e.*, superseded) versions of the performance evaluation test plan for a period of 5 years after each revision to the plan.
- (4) Requests for alternatives to RATA for CEMS as required in § 63.8(f)(6)(i).
- (5) Records of each deviation from monitoring requirements, including a description of the time period during which the deviation occurred, the nature and cause of the deviation, the corrective action taken or preventive measures adopted, and the nature of repairs or adjustments to the monitoring system.
- (d) You must keep the records required to show continuous compliance with each emission limitation that applies to you according to the requirements in Table 4 to this subpart.
- (e) You must also keep the records listed in paragraphs (e)(1) through (3) of this section for each batch in your affected source.
 - (1) Unique batch identification number.
 - (2) Fermentation stage for which you are using the fermenter.
 - (3) Unique CEMS equipment identification number.

§ 63.2183 In what form and how long must I keep my records?

- (a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).
- (b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You may keep the records off site for the remaining 3 years.
- (d) Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.
- (e) You must keep written procedures documenting the CEMS quality control program on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator.

OTHER REQUIREMENTS AND INFORMATION

§ 63.2190 What parts of the General Provisions apply to me?

Table 6 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.2191 Who implements and enforces this subpart?

- (a) We, the U.S. EPA, or a delegated authority such as your state, local, or tribal agency, can implement and enforce this subpart. If our Administrator has delegated authority to your state, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact the U.S. EPA Regional Office that serves you to find out if this subpart is delegated to your state, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by our Administrator and are not transferred to the state, local, or tribal agency.
- (c) The authorities that will not be delegated to state, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.
 - (1) Approval of alternatives to the non-opacity emission limitations in § 63.2140 under § 63.6(g).
 - (2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.
 - (3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.
 - (4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

§ 63.2192 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in 40 CFR 63.2, in the General Provisions of this part (§§ 63.1 through 63.15), and in this section as follows:

Batch means a single fermentation cycle in a single fermentation vessel (fermenter).

Batch monitoring period means the period that begins at the later of either the start of aeration or the addition of yeast to the fermenter; the period ends at the earlier of either the end of aeration or the point at which the yeast has begun being emptied from the fermenter.

BAVOC means the average VOC concentration in the fermenter exhaust over the duration of a batch ("batch-average VOC concentration").

Brew means the mixture of yeast and additives in the fermenter.

Brew ethanol means the ethanol in fermenter liquid.

Brew ethanol monitor means the monitoring system that you use to measure brew ethanol to demonstrate compliance with this subpart. The monitoring system includes a resistance element used as an ethanol sensor, with the measured resistance proportional to the concentration of ethanol in the brew.

Brew-to-exhaust correlation means the correlation between the concentration of ethanol in the brew and the concentration of VOC in the fermenter exhaust. This correlation is specific to each fed-batch fermentation stage and is established while manufacturing the product that comprises the largest percentage (by mass) of average annual production.

Emission limitation means any emission limit or operating limit.

Fed-batch means the yeast is fed carbohydrates and additives during fermentation in the vessel.

Monitoring system malfunction means any sudden, infrequent, and not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

1-hour period means any successive period commencing on the minute at which the batch monitoring period begins and continuing for 60 minutes, except for the last period, which may be less than 60 minutes.

Product means the yeast resulting from the final stage in a production run. Products are distinguished by yeast species, strain, and variety.

Responsible official means responsible official as defined in 40 CFR 70.2.

Set-batch means the yeast is fed carbohydrates and additives only at the start of the batch.

Specialty yeast includes, but is not limited to, yeast produced for use in wine, champagne, whiskey, and beer.

Within-concentration batch means a batch for which BAVOC is not higher than the maximum concentration that is allowed as part of the applicable emission limitation.

Table 1 to Subpart CCCC of Part 63—Emission Limitations

For each fed-batch fermenter producing yeast in the following fermentation stage . . .	98-percent option: You must not exceed the following VOC emission limitation ^a according to the timeline in Table 7 to this subpart . . .	Average option: You must not exceed the following VOC emission limitation ^a according to the timeline in Table 7 to this subpart . . .	Batch option: You must not exceed the following VOC emission limitation ^a according to the timeline in Table 7 to this subpart . . .
Last stage	100 ppmv (measured as propane) for BAVOC for at least 98 percent of all batches in each 12-month calculation period described in § 63.2171(b) and (e)	95 ppmv (measured as propane) for the average BAVOC of all batches in this stage in each 12-month calculation period described in § 63.2171(c) and (e)	100 ppmv (measured as propane) for BAVOC for each batch.
Second-to-last stage	200 ppmv (measured as propane) for BAVOC for at least 98 percent of all batches in each 12-month calculation period described in § 63.2171(b) and (e)	190 ppmv (measured as propane) for the average BAVOC of all batches in this stage in each 12-month calculation period described in § 63.2171(c) and (e)	200 ppmv (measured as propane) for BAVOC for each batch.
Third-to-last stage	300 ppmv (measured as propane) for BAVOC for at least 98 percent of all batches in each 12-month calculation period described in § 63.2171(b) and (e)	285 ppmv (measured as propane) for the average BAVOC of all batches in this stage in each 12-month calculation period described in § 63.2171(c) and (e)	300 ppmv (measured as propane) for BAVOC for each batch.

^a The emission limitation does not apply during the production of specialty yeast.

Table 2 to Subpart CCCC of Part 63—Requirements for Performance Tests If You Monitor Brew Ethanol

For each fed-batch fermenter for which compliance is determined by monitoring brew ethanol concentration and calculating VOC concentration in the fermenter exhaust according to the procedures in § 63.2161, you must . . .	Using . . .	According to the following requirements . . .
Measure VOC as propane	Method 25A, ^a or an alternative validated by EPA Method 301 ^b and approved by the Administrator	You must measure the VOC concentration in the fermenter exhaust at any point prior to the dilution of the exhaust stream.

^a EPA Test Method 25A is found in appendix A–7 of 40 CFR part 60.

^b EPA Test Method 301 is found in appendix A of 40 CFR part 63.

Table 3 to Subpart CCCC of Part 63—Initial Compliance With Emission Limitations

For . . .	Average option: You have demonstrated initial compliance if . . .	Batch option: You have demonstrated initial compliance if . . .
Each fed-batch fermenter producing yeast in a fermentation stage (last, second-to-last, or third-to-last) for which compliance is determined by monitoring VOC concentration in the fermenter exhaust	The average BAVOC of all batches in each fermentation stage during the initial compliance period described in § 63.2160(a) does not exceed the applicable concentration in Table 1 to this subpart	BAVOC for each batch of each fermentation stage during the initial compliance period described in § 63.2160(b) does not exceed the applicable concentration in Table 1 to this subpart.

Table 4 to Subpart CCCC of Part 63—Continuous Compliance With Emission Limitations

For . . .	98-percent option: You must demonstrate continuous compliance by . . .	Average option: You must demonstrate continuous compliance by . . .	Batch option: You must demonstrate continuous compliance by . . .
1. Each fed-batch fermenter producing yeast in a fermentation stage (last, second-to-last, or third-to-last) for which compliance is determined by monitoring VOC concentration in the fermenter exhaust	Showing that BAVOC for at least 98 percent of the batches for each 12-month calculation period ending within a semiannual reporting period described in § 63.2181(b)(3) does not	Showing that the average BAVOC of all batches in each fermentation stage during each 12-month calculation period ending within a semiannual reporting period described in § 63.2181(b)(3) does	Showing that BAVOC for each batch within a semiannual reporting period described in § 63.2181(b)(3) does not exceed

For . . .	98-percent option: You must demonstrate continuous compliance by . . .	Average option: You must demonstrate continuous compliance by . . .	Batch option: You must demonstrate continuous compliance by . . .
2. Each fed-batch fermenter producing yeast in a fermentation stage (last, second-to-last, or third-to-last) for which compliance is determined by monitoring brew ethanol concentration and calculating VOC concentration in the fermenter exhaust according to the procedures in § 63.2161 ^a	exceed the applicable maximum concentration in Table 1 to this subpart	not exceed the applicable concentration in Table 1 to this subpart	the applicable concentration in Table 1 to this subpart.

^a Monitoring brew ethanol concentration to demonstrate compliance is not allowed on and after October 16, 2020, as specified in Table 8 to this subpart.

Table 5 to Subpart CCCC of Part 63—Requirements for Reports

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. The information described in § 63.2181(c), as appropriate	Semiannually according to the requirements in § 63.2181(b).
	b. If you fail to meet an applicable standard during the reporting period, then the compliance report must include the information in § 63.2181(c)(5) or (7)	Semiannually according to the requirements in § 63.2181(b).
2. Performance test report	The results of the performance test, including the information described in § 63.7(g)	At least once every 365 calendar days and according to the requirements in § 63.2181(a)(1)(i).
3. Performance evaluation report	The results of the performance evaluation, including information from the performance evaluation plan at § 63.8(e)(3)	At least once every twelve calendar quarters and according to the requirements in §§ 63.2163(f) and 63.2181(a)(1)(ii).

Table 6 to Subpart CCCC of Part 63—Applicability of General Provisions to Subpart CCCC

Citation	Subject	Applicable to subpart CCCC?
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes.

Citation	Subject	Applicable to subpart CCCC?
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities and Circumvention	Yes.
§ 63.5	Construction and Reconstruction	Yes.
§ 63.6	Compliance With Standards and Maintenance Requirements	1. § 63.6(e)(1)(i) does not apply, instead specified in § 63.2150(d). 2. § 63.6(e)(1)(ii), (e)(3), (f)(1), and (h) do not apply. 3. Otherwise, all apply.
§ 63.7	Performance Testing Requirements	1. § 63.7(a)(1) and (2) do not apply, instead specified in § 63.2162. 2. § 63.7(e)(1) and (e)(3) do not apply, instead specified in § 63.2161(b). 3. Otherwise, all apply.
§ 63.8	Monitoring Requirements	1. § 63.8(a)(2) is modified by § 63.2163. 2. § 63.8(d)(3) is modified by § 63.2182(c)(3) and § 63.2183(e). 3. § 63.8(a)(4), (c)(1)(i), (c)(1)(iii), (c)(4)(i), (c)(5), (e)(5)(ii), and (g)(5) do not apply. 4. § 63.8(c)(6), (c)(8), (e)(4), (g)(1), and (g)(3) do not apply, instead specified in §§ 63.2163(b) and (j), 63.2164(c), and 63.2182(c)(1) and (5). 5. Otherwise, all apply.
§ 63.9	Notification Requirements	1. § 63.9(b)(2) does not apply because rule omits requirements for initial notification for affected sources that start up prior to May 21, 2001. 2. § 63.9(f) does not apply. 3. Otherwise, all apply.
§ 63.10	Recordkeeping and Reporting Requirements	1. § 63.10(b)(2)(ii) does not apply, instead specified in § 63.2182(a)(2) and (c)(5). 2. § 63.10(b)(2)(i), (b)(2)(iv), (b)(2)(v), (c)(15), (d)(3), (e)(2)(ii), and (e)(3) and (4) do not apply. 3. § 63.10(d)(5) does not apply, instead specified in § 63.2181(c)(5) and (7). 4. Otherwise, all apply.
§ 63.11	Flares	No.
§ 63.12	Delegation	Yes.
§ 63.13	Addresses	Yes.
§ 63.14	Incorporation by Reference	Yes.
§ 63.15	Availability of Information	Yes.

Table 7 to Subpart CCCC of Part 63—Emission Limitation Applicability Timeline

For each . . .	During this time frame . . .	You must comply with the emission limitations in Table 1 to this subpart using the . . .
Existing affected source	Before 10/16/2017 Between 10/16/2017	98-Percent Option. 98-Percent Option, Average Option, or

For each . . .	During this time frame . . .	You must comply with the emission limitations in Table 1 to this subpart using the . . .
	and October 16, 2018 On and after October 16, 2018	Batch Option. Average Option or Batch Option.
New or reconstructed affected source that you start up prior to 10/16/2017	Before 10/16/2017 Between 10/16/2017 and October 16, 2018 On and after October 16, 2018	98-Percent Option. 98-Percent Option, Average Option, or Batch Option. Average Option or Batch Option.
New or reconstructed affected source that you start up after 10/16/2017	After 10/16/2017	Average Option or Batch Option.

Table 8 to Subpart CCCC of Part 63—Monitoring System Requirements Timeline

For each . . .	During this time frame . . .	You must monitor VOC concentration by . . .
Existing affected source	Before 10/16/2017	Monitoring fermenter exhaust using a CEMS or by monitoring brew ethanol concentration using a brew ethanol monitor.
	Between 10/16/2017 and October 16, 2020	Monitoring fermenter exhaust using a VOC CEMS or by monitoring brew ethanol concentration using a brew ethanol monitor.
	On and after October 16, 2020	Monitoring fermenter exhaust using a VOC CEMS.
New or reconstructed affected source that you start up prior to 10/16/2017	Before 10/16/2017	Monitoring fermenter exhaust using a CEMS or by monitoring brew ethanol concentration using a brew ethanol monitor.
	Between 10/16/2017 and October 16, 2020	Monitoring fermenter exhaust using a VOC CEMS or by monitoring brew ethanol concentration using a brew ethanol monitor.
	On and after October 16, 2020	Monitoring fermenter exhaust using a VOC CEMS.
New or reconstructed affected source that you start up after 10/16/2017	After 10/16/2017	Monitoring fermenter exhaust using a VOC CEMS.



PERMIT APPLICATION FOR AIR CONTAMINANT SOURCES

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF AIR QUALITY

SFN 8516 (9-2021)

SECTION A - FACILITY INFORMATION

Name of Firm or Organization				
Applicant's Name				
Title		Telephone Number		E-mail Address
Contact Person for Air Pollution Matters				
Title		Telephone Number		E-mail Address
Mailing Address (Street & No.)				
City		State		ZIP Code
Facility Name				
Facility Address (Street & No.)				
City		State		ZIP Code
County		Coordinates NAD 83 in Decimal Degrees (to fourth decimal degree)		
		Latitude		Longitude
Legal Description of Facility Site				
Quarter	Quarter	Section	Township	Range
Land Area at Facility Site _____ Acres (or) _____ Sq. Ft.		MSL Elevation at Facility		

SECTION B - GENERAL NATURE OF BUSINESS

Describe Nature of Business	North American Industry Classification System Number	Standard Industrial Classification Number (SIC)

SECTION C - GENERAL PERMIT INFORMATION

Type of Permit? ☐ Permit to Construct (PTC) ☐ Permit to Operate (PTO)	
If application is for a Permit to Construct, please provide the following data:	
Planned Start Construction Date Plant is existing and no additions or modifications are expected	Planned End Construction Date Plant is existing (Constructed 1989); New Ownership transfer May 2017

SECTION D – SOURCE IDENTIFICATION AND CATEGORY OF EACH SOURCE INCLUDED ON THIS PERMIT APPLICATION

Your Source ID Number	Source or Unit (Equipment, Machines, Devices, Boilers, Processes, Incinerators, Etc.)	Permit to Construct				Minor Source Permit to Operate						
		New Source	Existing Source Modification	Existing Source Expansion	Existing Source Change of Location	New Source	Existing Source Initial Application	Existing Source After Modification	Existing Source After Expansion	Existing Source After Change of Location	Existing Source After Change of Ownership	Other
		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Add additional pages if necessary

SECTION D2 – APPLICABLE REGULATIONS

Source ID No.	Applicable Regulations (NSPS/MACT/NESHAP/etc.)
Facility-wide	

SECTION E – TOTAL POTENTIAL EMISSIONS

Pollutant	Amount (Tons Per Year)
NO _x	
CO	
PM	

Pollutant	Amount (Tons Per Year)
PM ₁₀ (filterable and condensable)	
PM _{2.5} (filterable and condensable)	
SO ₂	
VOC	259.61
GHG (as CO ₂ e)	
Largest Single HAP	Acetaldehyde - 77.12
Total HAPS	77.12

*If performance test results are available for the unit, submit a copy of test with this application. If manufacturer guarantee is used provide spec sheet.

SECTION F1 – ADDITIONAL FORMS

Indicate which of the following forms are attached and made part of the application	
☐ Air Pollution Control Equipment (SFN 8532)	☐ Fuel Burning Equipment Used for Indirect Heating (SFN 8518)
☐ Construct/Operate Incinerators (SFN 8522)	☒ Hazardous Air Pollutant (HAP) Sources (SFN 8329)
☐ Natural Gas Processing Plants (SFN 11408)	☒ Manufacturing or Processing Equipment (SFN 8520)
☐ Glycol Dehydration Units (SFN 58923)	☐ Volatile Organic Compounds Storage Tank (SFN 8535)
☐ Flares (SFN 59652)	☐ Internal Combustion Engines and Turbines (SFN 8891)
☐ Grain, Feed, and Fertilizer Operations (SFN 8524)	☐ Oil/Gas Production Facility Registration (SFN 14334)

SECTION F2 – OTHER ATTACHMENTS INCLUDED AS PART OF THIS APPLICATION

1. Cover Letter	4. Potential to Emit Calculations
2. Proposed Plot Plan	5. SFN 8520
3. Dakota Yeast Process Flow Chart	6. SFN 8329

I, the undersigned applicant, am fully aware that statements made in this application and the attached exhibits and statements constitute the application for Permit(s) to Construct and/or Operate Air Contaminant sources from the North Dakota Department of Environmental Quality and certify that the information in this application is true, correct and complete to the best of my knowledge and belief. Further, I agree to comply with the provisions of Chapter 23.1-06 of the North Dakota Century Code and all rules and regulations of the Department, or revisions thereof. I also understand the permit is nontransferable and, if granted a permit, I will promptly notify the Department upon sale or legal transfer of this permitted establishment.

Signature 	Date 03/27/2025
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