

Synthetic Minor Determination and/or Netting Determination

Permit To Install **13-04559**

A. Source Description

New York Frozen Foods (NYFF) is a commercial Bakery Oven Facility. This Synthetic Minor Permit-to-Install is for three bread baking ovens (P004, P005, and P006).

B. Facility Emissions and Attainment Status

Facility's current uncontrolled Potential to Emit (PTE) VOC is at 142.04 tons/year. The ovens in this permit will be restricted to 91 tons/year VOC in order to keep facility-wide emissions below 100 tons/year to avoid being major for Title V permitting purposes. VOC is the pollutant of concern. Cuyahoga County is currently designated as nonattainment for ozone.

C. Source Emissions

Oven No. 4 (P004) has a PTE of 37.97 tons/year VOC and current actual emissions of 14.5 tons/year VOC with future projected actual emissions of 15.7 tons/year VOC. Oven No. 5 (P005) has a PTE of 48.0 tons/year VOC and current actual emissions of 7.5 tons/year VOC with future projected actual emissions of 15.4 tons/year VOC. Oven No. 6 has a PTE of 59.9 tons/year VOC. PTI Allowable will be set at 91 tons/year VOC combined for P004 - P006 (excluding products of combustion) in order to keep facility-wide emissions below 100 tons/year to avoid being major for Title V permitting purposes. The 91 ton/year restriction will be established through an operating restriction on bread production using the formula to calculate emissions for each type of bread production.

This facility will be a minor source for NNSR upon issuance of this Synthetic Minor PTI. The increase in actual emissions from existing units combined with the new unit allowable emissions would otherwise be greater than the major modification threshold of 40 tpy for VOC.

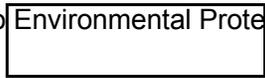
As noted above, total facility emissions will be restricted to 91 tpy (excluding products of combustion) by establishing a restriction on bread production using the formula for calculating VOC emissions for each different type of product and summing the results. The 91 tpy restriction represents the "future projected actual" emissions from P004 and P005 plus the potential to emit for P006 ($15.7 + 15.4 + 58.9 = 91$ tpy).

D. Conclusion

This permit will restrict these three ovens to 91 tons/year VOC. Due to this restriction, Title V will not apply to this facility as the facility-wide emissions will be kept below the Title V and NSR major stationary source threshold of 100 tons/year. By establishing a restriction on bread production will restrict VOC emissions to 91 tpy for emissions units P004 through P006.



State of Ohio Environmental Protection Agency



**RE: DRAFT PERMIT TO INSTALL
CUYAHOGA COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

Application No: 13-04559

Fac ID: 1318047969

DATE: 2/7/2006

New York Frozen Foods
Michael Mahon
25900 Fargo Avenue
Bedford Heights, OH 44146

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1500** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CLAA

PA

CUYAHOGA COUNTY

PUBLIC NOTICE

**ISSUANCE OF DRAFT PERMIT TO INSTALL 13-04559 FOR AN AIR CONTAMINANT SOURCE FOR
New York Frozen Foods**

On 2/7/2006 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **New York Frozen Foods**, located at **25900 Fargo Avenue, Bedford Heights**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 13-04559:

Modification to Ovens 4 and 5, and installation of a new oven to replace ovens 1, 2, and 3 -- modified and new emissions units P004-P006.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

David Hearne, Cleveland City Health Department, Division of the Environment, 1925 St. Clair Avenue,
Cleveland, OH 44114 [(216)664-2324]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 13-04559

Application Number: 13-04559
Facility ID: 1318047969
Permit Fee: **To be entered upon final issuance**
Name of Facility: New York Frozen Foods
Person to Contact: Michael Mahon
Address: 25900 Fargo Avenue
Bedford Heights, OH 44146

Location of proposed air contaminant source(s) [emissions unit(s)]:

**25900 Fargo Avenue
Bedford Heights, Ohio**

Description of proposed emissions unit(s):

**Modification to Ovens 4 and 5, and installation of a new oven to replace ovens 1, 2, and 3 --
modified and new emissions units P004-P006.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

New York Frozen Foods

PTI Application: 13-04559

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

Facility ID: 1318047969

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

New York Frozen Foods
PTI Application: 13-04559

Facility ID: 1318047969

Issued: To be entered upon final issuance

conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental

New York Frozen Foods

Facility ID: 1318047969

PTI Application: 13-04559

Issued: To be entered upon final issuance

Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

New York Frozen Foods
PTI Application: 13-04559
Issued: To be entered upon final issuance

Facility ID: 1318047969

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

New York Frozen Foods

PTI Application: 13-04559

Issued: To be entered upon final issuance

Facility ID: 1318047969

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	91.66
NOx	7.14
CO	5.96

New \

PTI A

Emissions Unit ID: P004

Issued: To be entered upon final issuance

Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P004 - 3.36 mmBTU/hour direct natural gas-fired tunnel Oven No. 4	OAC rule 3745-18-06(A) OAC rule 3745-31-05(A)(3) OAC rule 3745-21-07(G)
Modification There was no Permit-to-Install issued for this unit back in 1988 when it was first installed.	OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V

OAC rule 3745-17-07(A)

OAC rule 3745-17-11

New **PTI A**

Emissions Unit ID: P004

Issued: To be entered upon final issuance

<u>Applicable Emissions Limitations/Control Measures</u>	
13.68 lbs/hour and 59.9 tons/year of VOC	3745-31-05(A)(3). Exempt (See B.1 below).
Visible particulate emissions from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.	See A.2.b below. The combined annual VOC emissions from P004, P005, and P006 shall not exceed 91.0 tons/year as a rolling, 12-month summation (excluding products of combustion).
0.33 lb/hour and 1.45 tons/year of NO _x from the combustion of natural gas.	
0.28 lb/hour and 1.23 tons/year of CO from the combustion of natural gas.	
See A.2.a below.	
The requirements of this rule include compliance with the requirements of OAC rule 3745-31-05(C).	
The visible emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).	
The emission limitation specified by this rule is less stringent than the requirements of OAC rule	

New \
PTI A

Emissions Unit ID: P004

Issued: To be entered upon final issuance

2. Additional Terms and Conditions

- 2.a** The hourly and annual emission limits for this emissions unit have been established at the unit's potential to emit; therefore, monitoring, recordkeeping, and reporting are not needed for these limits.
- 2.b** No liquid organic materials are employed in this emissions unit; therefore, OAC rule 3745-21-07(G) is not applicable.

B. Operational Restrictions

- The permittee shall only burn natural gas in this emissions unit.
- The permittee shall determine the emission factor (EF) established by the following equation for VOC emissions for each different recipe used in bread baking operations taken from AP-42, Volume 1, Fifth Edition (January, 1995), section 9.9.6, "Bread Baking" for each recipe:

$$\text{VOC EF} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

Where

VOC EF = pounds of VOC per ton of baked bread

Y_i = initial baker's percentage of yeast

t_i = total yeast action time in hours

S = final (spike) baker's percentage of yeast

t_s = spiking time in hours

The total combined bread produced in P004, P005, and P006 shall be restricted on a rolling, 12-month summation using the following equation:

$$\sum_{i=1}^n [\text{EF VOC}_i \times (\text{tons product}_i/\text{month})] / (2,000 \text{ pounds/ton}) + X$$

$$\leq 91.0 \text{ tons VOC/rolling 12-month period}$$

Where

i = each different recipe used in baking operations

X = total VOC emissions for the past 11 months

The total combined emissions of VOC from P004, P005, and P006 shall not exceed 91.0 tons per year, based upon a rolling, 12-month summation of the VOC emissions

**New **
PTI A

Emissions Unit ID: P004

Issued: To be entered upon final issuance
 using the above formula.

To ensure enforceability during the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons) (Combined P004, P005, and P006)</u>
1	7.5
1-2	15.0
1-3	22.5
1-4	30.0
1-5	37.5
1-6	45.0
1-7	52.5
1-8	60.0
1-9	67.5
1-10	75.0
1-11	82.5
1-12	91.0

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual bread production and VOC emission limitation shall be based upon a rolling, 12-month summation of the bread production and VOC emissions.

C. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain monthly records of the following information for P004, P005, and P006 combined:
 - a. the name and identification of each recipe produced;
 - b. the total amount of baked goods produced per recipe, in tons per month;

Emissions Unit ID: P004

- c. the emission factor for each recipe as calculated in Section B.2;
 - d. the total monthly VOC emissions, in tons, for each recipe by summing [(b. x c.)/2,000] for all recipes produced in accordance with Section B.2 above; and
 - e. the rolling 12-month summation of total VOC emissions, in tons.
3. The permit to install for this emissions unit P004 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethanol

TLV (mg/m³): 1,880

Maximum Hourly Emission Rate (lbs/hour): 41.04 (combined total for P004 - P006)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 37,420

MAGLC (ug/m³): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emissions of a compound with the lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

New **PTI A**

Emissions Unit ID: P004

Issued: To be entered upon final issuance

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy;" and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for VOC and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative VOC emissions levels shown in Section B.2. These reports shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Unit ID: P004

- a. Emission Limitation:
13.68 lbs/hr of VOC

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor established by the equation for VOC emissions from bread baking operations was taken from AP-42, Volume 1, Fifth Edition (January, 1995), section 9.9.6, "Bread Baking" by the amount of bread produced, in tons. This is shown below in a one time calculation of Potential-to-Emit for the worst case recipe at the maximum production rate:

$$\text{VOC EF} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

Where

VOC EF = pounds of VOC per ton of baked bread

Y_i = initial baker's percentage of yeast

t_i = total yeast action time in hours

S = final (spike) baker's percentage of yeast

t_s = spiking time in hours

$$\begin{aligned} \text{VOC EF} &= 0.95(5.1\%) + 0.195(1.2) + 0.51(0\%) - 0.86(0\%) + 1.90 \\ &= 6.98 \text{ pounds VOC/ton baked bread} \end{aligned}$$

(6.98 pounds VOC/ton baked bread) x (1.96 tons baked bread/hour) = 13.68 pounds VOC/hour

- b. Emission Limitation:
59.9 TPY of VOC

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- c. Emission Limitation:
5% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the requirements specified in OAC rule 3745-17-03(B)(1) and the methods and procedures required in 40 CFR Part 60, Appendix A, Method 9.

- d. Emission Limitation:
The combined annual VOC emissions for P004, P005, and P006 shall not exceed 91.0 tons/year as a rolling, 12-month summation (excluding products of

New \

PTI A

Emissions Unit ID: P004

Issued: To be entered upon final issuance

combustion).

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping from Section C above and the following:

$$\sum_{i=1}^n [EF \text{ VOC}_i \times (\text{tons product}_i/\text{month})] / (2,000 \text{ pounds/ton}) = \text{tons VOC/month}$$

Where

i = each different recipe used in baking operations

The permittee shall then sum the total monthly VOC emissions as a rolling, 12-month summation.

- e. Emission Limitation:
0.33 lb/hr of NO_x from the 3.36 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating of the natural gas-fired burner. Since the emissions factor are given in a volume format, they were converted to an energy basis by dividing the given factor by 1,020 mmBTU/10⁶ scf.

- f. Emission Limitation:
1.45 TPY of NO_x from the 3.36 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- g. Emission Limitation:
0.28 lb/hr of CO from the 3.36 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying

Emissions Unit ID: P004

the emission factor from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating of the natural gas-fired burner. Since the emissions factor are given in a volume format, they were converted to an energy basis by dividing the given factor by 1,020 mmBTU/10⁶ scf.

- h. Emission Limitation:
1.23 TPY of CO from the 3.36 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable: A, B, C.1, C.2, D, E, and F.
2. PTE was determined using the recipe with the highest emission factor. Since the product recipe determines the process weight rate due to cooking time needed, the PTE was the same for all three ovens in this permit.

New \
PTI A

Emissions Unit ID: P005

Issued: To be entered upon final issuance

Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	
P005 - 6.2 mmBTU/hour direct natural gas-fired tunnel oven No. 5	OAC rule 3745-31-05(A)(3)	OAC rule 3745-18-06(A)
Modification This Permit-to-Install replaces 13-02907 issued 3/22/1995.		OAC rule 3745-21-07(G)
		OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11	

New \

PTI A

Emissions Unit ID: P005

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Applicable Emissions
Limitations/Control
Measures

requirements of OAC rule 3745-31-05(A)(3).

13.68 lb/hour and 59.9 tons/year of VOC

Exempt (See B.1 below).

See A.2.b below.

Visible particulate emissions from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

The combined annual VOC emissions from P004, P005, and P006 shall not exceed 91.0 tons/year as a rolling, 12-month summation (excluding products of combustion).

0.61 lb/hour and 2.67 tons/year of NOx from the combustion of natural gas.

0.51 lb/hour and 2.23 tons/year of CO from the combustion of natural gas.

See A.2.a below.

The requirements of this rule include compliance with the requirements of OAC rule 3745-31-05(C).

The visible emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the

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2. Additional Terms and Conditions

- 2.a** The hourly and annual emission limits for this emissions unit have been established at the unit's potential to emit; therefore, monitoring, recordkeeping, and reporting are not needed for these limits.
- 2.b** No liquid organic materials are employed in this emissions unit; therefore, OAC rule 3745-21-07(G) is not applicable.

B. Operational Restrictions

1. The permittee shall only burn natural gas as fuel in this emissions unit.
2. The permittee shall determine the emission factor (EF) established by the following equation for VOC emissions for each different recipe used in bread baking operations taken from AP-42, Volume 1, Fifth Edition (January, 1995), section 9.9.6, "Bread Baking" for each recipe:

$$\text{VOC EF} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

Where

VOC EF = pounds of VOC per ton of baked bread

Y_i = initial baker's percentage of yeast

t_i = total yeast action time in hours

S = final (spike) baker's percentage of yeast

t_s = spiking time in hours

The total combined bread produced in P004, P005, and P006 shall be restricted on a rolling, 12-month summation using the following equation:

$$\sum_{i=1}^n [\text{EF VOC}_i \times (\text{tons product}/\text{month})] / (2,000 \text{ pounds}/\text{ton}) + X$$

$$\leq 91.0 \text{ tons VOC}/\text{rolling 12-month period}$$

Where

i = each different recipe used in baking operations

X = total VOC emissions for the past 11 months

The total combined emissions of VOC from P004, P005, and P006 shall not exceed 91.0 tons per year, based upon a rolling, 12-month summation of the VOC emissions

using the above formula.

To ensure enforceability during the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons) (Combined P004, P005, and P006)</u>
1	7.5
1-2	15.0
1-3	22.5
1-4	30.0
1-5	37.5
1-6	45.0
1-7	52.5
1-8	60.0
1-9	67.5
1-10	75.0
1-11	82.5
1-12	91.0

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual bread production and VOC emission limitation shall be based upon a rolling, 12-month summation of the bread production and VOC emissions.

C. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain monthly records of the following information for P004, P005, and P006 combined:
 - a. the name and identification of each recipe produced;
 - b. the total amount of baked goods produced per recipe, in tons per month;
 - c. the emission factor for each recipe as calculated in Section B.2;
 - d. the total monthly VOC emissions, in tons, for each recipe by summing [(b. x c.)/2,000] for all recipes produced in accordance with Section B.2 above; and

New \
PTI A

Emissions Unit ID: P005

Issued: To be entered upon final issuance

- e. the rolling 12-month summation of total VOC emissions, in tons.
3. The permit to install for this emissions unit P004 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethanol

TLV (mg/m³): 1,880

Maximum Hourly Emission Rate (lbs/hour): 41.04 (combined for P004 - P006)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 37,420

MAGLC (ug/m³): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emissions of a compound with the lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy;" and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for VOC and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative VOC emissions levels shown in Section B.2. These reports shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
13.68 lbs/hr of VOC

Applicable Compliance Method:
Compliance with the pound per hour limitation shall be determined by multiplying

New \
PTI A

Emissions Unit ID: P005

Issued: To be entered upon final issuance

the emission factor established by the equation for VOC emissions from bread baking operations was taken from AP-42, Volume 1, Fifth Edition (January, 1995), section 9.9.6, "Bread Baking" by the amount of bread produced, in tons. This is shown below in a one time calculation of Potential-to-Emit for the worst case recipe at the maximum production rate:

$$\text{VOC EF} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

Where

VOC EF = pounds of VOC per ton of baked bread

Y_i = initial baker's percentage of yeast

t_i = total yeast action time in hours

S = final (spike) baker's percentage of yeast

t_s = spiking time in hours

$$\begin{aligned} \text{VOC EF} &= 0.95(5.1\%) + 0.195(1.2) + 0.51(0\%) - 0.86(0\%) + 1.90 \\ &= 6.98 \text{ pounds VOC/ton baked bread} \end{aligned}$$

(6.98 pounds VOC/ton baked bread) x (1.96 tons baked bread/hour) = 13.68 pounds VOC/hour

- b. Emission Limitation:
59.9 TPY of VOC

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- c. Emission Limitation:
5% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the requirements specified in OAC rule 3745-17-03(B)(1) and the methods and procedures required in 40 CFR Part 60, Appendix A, Method 9.

- d. Emission Limitation:
The combined annual VOC emissions for P004, P005, and P006 shall not exceed 91.0 tons/year as a rolling, 12-month summation (excluding products of

Emissions Unit ID: P005

combustion).

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping from Section C above and the following:

$$\sum_{i=1}^n [EF \text{ VOC}_i \times (\text{tons product}_i/\text{month})] / (2,000 \text{ pounds/ton}) = \text{tons VOC/month}$$

Where

i = each different recipe used in baking operations

The permittee shall then sum the total monthly VOC emissions as a rolling, 12-month summation.

- e. Emission Limitation:
0.61 lb/hr of NO_x from the 6.2 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating of the natural gas-fired burner. Since the emissions factor are given in a volume format, they were converted to an energy basis by dividing the given factor by 1,020 mmBTU/10⁶ scf.

- f. Emission Limitation:
2.67 TPY of NO_x from the 6.2 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- g. Emission Limitation:
0.51 lb/hr of CO from the 6.2 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating of the natural gas-fired burner. Since the emissions factor are given in a volume format, they were converted to an energy basis by dividing the

New \
PTI A

Emissions Unit ID: P005

Issued: To be entered upon final issuance

given factor by 1,020 mmBTU/10⁶ scf.

- h. Emission Limitation:
2.23 TPY of CO from the 6.2 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable: A, B, C.1, C.2, D, E, and F.
2. PTE was determined using the recipe with the highest emission factor. Since the product recipe determines the process weight rate due to cooking time needed, the PTE was the same for all three ovens in this permit.

New \
PTI A

Emissions Unit ID: P006

Issued: To be entered upon final issuance

Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P006 - 7 mmBTU/hour direct natural gas-fired tunnel Oven No. 6	OAC rule 3745-18-06(A) OAC rule 3745-21-07(G) OAC rule 3745-31-05(C) Synthetic Minor to avoid Title V
	OAC rule 3745-17-07(A)
	OAC rule 3745-17-11

**New **
PTI A

Emissions Unit ID: P006

Issued: To be entered upon final issuance

Applicable Emissions
Limitations/Control
Measures

3745-31-05(A)(3).

Exempt (See B.1 below).

13.68 lb/hour and 59.9 tons/year of VOC

See A.2.b below.

Visible particulate emissions from the stack(s) serving this emissions unit shall not exceed 5% opacity, as a six-minute average.

The combined annual VOC emissions from P004, P005, and P006 shall not exceed 91.0 tons/year as a rolling, 12-month summation (excluding products of combustion).

0.69 lb/hour and 3.02 tons/year of NOx from the combustion of natural gas.

0.57 lb/hour and 2.50 tons/year of CO from the combustion of natural gas.

See A.2.a below.

The requirements of this rule include compliance with the requirements of OAC rule 3745-31-05(C).

The visible emission limitation specified by this rule is less stringent than the requirements of OAC rule 3745-31-05(A)(3).

The emission limitation specified by this rule is less stringent than the requirements of OAC rule

Emissions Unit ID: P006

2. Additional Terms and Conditions

- 2.a** The hourly and annual emission limits for this emissions unit have been established at the unit's potential to emit; therefore, monitoring, recordkeeping, and reporting are not needed for these limits.
- 2.b** No liquid organic materials are employed in this emissions unit; therefore, OAC rule 3745-21-07(G) is not applicable.

B. Operational Restrictions

- The permittee shall only burn natural gas as fuel in this emissions unit.
- The permittee shall determine the emission factor (EF) established by the following equation for VOC emissions for each different recipe used in bread baking operations taken from AP-42, Volume 1, Fifth Edition (January, 1995), section 9.9.6, "Bread Baking" for each recipe:

$$\text{VOC EF} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

Where

VOC EF = pounds of VOC per ton of baked bread

Y_i = initial baker's percentage of yeast

t_i = total yeast action time in hours

S = final (spike) baker's percentage of yeast

t_s = spiking time in hours

The total combined bread produced in P004, P005, and P006 shall be restricted on a rolling, 12-month summation using the following equation:

$$\sum_{i=1}^n [\text{EF VOC}_i \times (\text{tons product}_i/\text{month})] / (2,000 \text{ pounds/ton}) + X$$

$$\leq 91.0 \text{ tons VOC/rolling 12-month period}$$

Where

i = each different recipe used in baking operations

X = total VOC emissions for the past 11 months

The total combined emissions of VOC from P004, P005, and P006 shall not exceed 91.0 tons per year, based upon a rolling, 12-month summation of the VOC emissions using the above formula.

To ensure enforceability during the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the levels specified in the following table:

New \

PTI A

Emissions Unit ID: P006

Issued: To be entered upon final issuance

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Emissions of VOC (Tons) (Combined P004, P005, and P006)</u>
1	7.5
1-2	15.0
1-3	22.5
1-4	30.0
1-5	37.5
1-6	45.0
1-7	52.5
1-8	60.0
1-9	67.5
1-10	75.0
1-11	82.5
1-12	91.0

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual bread production and VOC emission limitation shall be based upon a rolling, 12-month summation of the bread production and VOC emissions.

C. Monitoring and/or Recordkeeping Requirements

1. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
2. The permittee shall maintain monthly records of the following information for P004, P005, and P006 combined:
 - a. the name and identification of each recipe produced;
 - b. the total amount of baked goods produced per recipe, in tons per month;
 - c. the emission factor for each recipe as calculated in Section B.2;
 - d. the total monthly VOC emissions, in tons, for each recipe by summing [(b. x c.)/2,000] for all recipes produced in accordance with Section B.2 above; and

New **PTI A**

Emissions Unit ID: P006

Issued: To be entered upon final issuance

- e. the rolling 12-month summation of total VOC emissions, in tons.
3. The permit to install for this emissions unit P004 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Ethanol

TLV (mg/m³): 1,880

Maximum Hourly Emission Rate (lbs/hour): 41.04 (combined for P004 - P006)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 37,420MAGLC (ug/m³): 44,762

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emissions of a compound with the lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack

diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy;" and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for VOC and, for the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative VOC emissions levels shown in Section B.2. These reports shall be submitted to the Cleveland Division of Air Quality (Cleveland DAQ) within 30 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:
13.68 lbs/hr of VOC

Applicable Compliance Method:

**New **
PTI A

Emissions Unit ID: P006

Issued: To be entered upon final issuance

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor established by the equation for VOC emissions from bread baking operations was taken from AP-42, Volume 1, Fifth Edition (January, 1995), section 9.9.6, "Bread Baking" by the amount of bread produced, in tons. This is shown below in a one time calculation of Potential-to-Emit for the worst case recipe at the maximum production rate:

$$\text{VOC EF} = 0.95Y_i + 0.195t_i - 0.51S - 0.86t_s + 1.90$$

Where

VOC EF = pounds of VOC per ton of baked bread

Y_i = initial baker's percentage of yeast

t_i = total yeast action time in hours

S = final (spike) baker's percentage of yeast

t_s = spiking time in hours

$$\begin{aligned} \text{VOC EF} &= 0.95(5.1\%) + 0.195(1.2) + 0.51(0\%) - 0.86(0\%) + 1.90 \\ &= 6.98 \text{ pounds VOC/ton baked bread} \end{aligned}$$

(6.98 pounds VOC/ton baked bread) x (1.96 tons baked bread/hour) = 13.68 pounds VOC/hour

- b. Emission Limitation:
59.9 TPY of VOC

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- c. Emission Limitation:
5% opacity as a 6-minute average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the requirements specified in OAC rule 3745-17-03(B)(1) and the methods and procedures required in 40 CFR Part 60, Appendix A, Method 9.

- d. Emission Limitation:
The combined annual VOC emissions for P004, P005, and P006 shall not

Emissions Unit ID: P006

exceed 91.0 tons/year as a rolling, 12-month summation (excluding products of combustion).

Applicable Compliance Method:

Compliance shall be determined based on the recordkeeping from Section C above and the following:

$$\sum_{i=1}^n [EF \text{ VOC}_i \times (\text{tons product}_i/\text{month})] / (2,000 \text{ pounds/ton}) = \text{tons VOC/month}$$

Where

i = each different recipe used in baking operations

The permittee shall then sum the total monthly VOC emissions as a rolling, 12-month summation.

- e. Emission Limitation:
0.69 lb/hr of NO_x from the 7 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating of the natural gas-fired burner. Since the emissions factor are given in a volume format, they were converted to an energy basis by dividing the given factor by 1,020 mmBTU/10⁶ scf.

- f. Emission Limitation:
3.02 TPY of NO_x from the 7 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- g. Emission Limitation:
0.57 lb/hr of CO from the 7 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

Compliance with the pound per hour limitation shall be determined by multiplying the emission factor from Section 1.4 ("Natural Gas Consumption") of AP-42, Fifth Edition, Volume 1, Chapter 1 by the mmBTU/hour rating of the natural gas-fired burner. Since the emissions factor are given in a volume format, they were

New **PTI A**

Emissions Unit ID: P006

Issued: To be entered upon final issuance

converted to an energy basis by dividing the given factor by 1,020 mmBTU/10⁶ scf.

- h. Emission Limitation:
2.50 TPY of CO from the 7 mmBTU/hour natural gas-fired burner

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

F. Miscellaneous Requirements

1. The following terms and conditions are federally enforceable: A, B, C.1 , C.2, D, E, and F.
2. PTE was determined using the recipe with the highest emission factor. Since the product recipe determines the process weight rate due to cooking time needed, the PTE was the same for all three ovens in this permit.