

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
AIR QUALITY DIVISION**

May 20, 2022

**PERMIT TO INSTALL  
5-17C**

**ISSUED TO**  
Perfection Bakeries, Inc.

**LOCATED AT**  
45789 Port Street  
Plymouth, Michigan 48170

**IN THE COUNTY OF**  
Wayne

**STATE REGISTRATION NUMBER**  
N8040

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

|   |            |
|---|------------|
| DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:<br><b>March 16, 2022</b> |            |
| DATE PERMIT TO INSTALL APPROVED:<br><b>May 20, 2022</b>                           | SIGNATURE: |
| DATE PERMIT VOIDED:   | SIGNATURE: |
| DATE PERMIT REVOKED:  | SIGNATURE: |

## PERMIT TO INSTALL

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### COMMON ACRONYMS

|                            |   |
|----------------------------|---|
| AQD                        | Air Quality Division  |
| BACT                       | Best Available Control Technology                           |
| CAA                        | Clean Air Act   |
| CAM                        | Compliance Assurance Monitoring                             |
| CEMS                       | Continuous Emission Monitoring System                       |
| CFR                        | Code of Federal Regulations                                 |
| COMS                       | Continuous Opacity Monitoring System                        |
| Department/department/EGLE | Michigan Department of Environment, Great Lakes, and Energy |
| EU                         | Emission Unit   |
| FG                         | Flexible Group  |
| GACS                       | Gallons of Applied Coating Solids                           |
| GC                         | General Condition   |
| GHGs                       | Greenhouse Gases  |
| HVLP                       | High Volume Low Pressure*                                   |
| ID                         | Identification  |
| IRSL                       | Initial Risk Screening Level                                |
| ITSL                       | Initial Threshold Screening Level                           |
| LAER                       | Lowest Achievable Emission Rate                             |
| MACT                       | Maximum Achievable Control Technology                       |
| MAERS                      | Michigan Air Emissions Reporting System                     |
| MAP                        | Malfunction Abatement Plan                                  |
| MSDS                       | Material Safety Data Sheet                                  |
| NA                         | Not Applicable  |
| NAAQS                      | National Ambient Air Quality Standards                      |
| NESHAP                     | National Emission Standard for Hazardous Air Pollutants     |
| NSPS                       | New Source Performance Standards                            |
| NSR                        | New Source Review   |
| PS                         | Performance Specification                                   |
| PSD                        | Prevention of Significant Deterioration                     |
| PTE                        | Permanent Total Enclosure                                   |
| PTI                        | Permit to Install   |
| RACT                       | Reasonable Available Control Technology                     |
| ROP                        | Renewable Operating Permit                                  |
| SC                         | Special Condition   |
| SCR                        | Selective Catalytic Reduction                               |
| SNCR                       | Selective Non-Catalytic Reduction                           |
| SRN                        | State Registration Number                                   |
| TBD                        | To Be Determined  |
| TEQ                        | Toxicity Equivalence Quotient                               |
| USEPA/EPA                  | United States Environmental Protection Agency               |
| VE                         | Visible Emissions   |

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

### POLLUTANT / MEASUREMENT ABBREVIATIONS

|                   |  |
|-------------------|--|
| acfm              | Actual cubic feet per minute                                     |
| BTU               | British Thermal Unit   |
| °C                | Degrees Celsius  |
| CO                | Carbon Monoxide  |
| CO <sub>2</sub> e | Carbon Dioxide Equivalent  |
| dscf              | Dry standard cubic foot  |
| dscm              | Dry standard cubic meter   |
| °F                | Degrees Fahrenheit   |
| gr                | Grains   |
| HAP               | Hazardous Air Pollutant  |
| Hg                | Mercury  |
| hr                | Hour   |
| HP                | Horsepower   |
| H <sub>2</sub> S  | Hydrogen Sulfide   |
| kW                | Kilowatt   |
| lb                | Pound  |
| m                 | Meter  |
| mg                | Milligram  |
| mm                | Millimeter   |
| MM                | Million  |
| MW                | Megawatts  |
| NMOC              | Non-Methane Organic Compounds                                    |
| NO <sub>x</sub>   | Oxides of Nitrogen   |
| ng                | Nanogram   |
| PM                | Particulate Matter   |
| PM10              | Particulate Matter equal to or less than 10 microns in diameter  |
| PM2.5             | Particulate Matter equal to or less than 2.5 microns in diameter |
| pph               | Pounds per hour  |
| ppm               | Parts per million  |
| ppmv              | Parts per million by volume                                      |
| ppmw              | Parts per million by weight                                      |
| psia              | Pounds per square inch absolute                                  |
| psig              | Pounds per square inch gauge                                     |
| scf               | Standard cubic feet  |
| sec               | Seconds  |
| SO <sub>2</sub>   | Sulfur Dioxide   |
| TAC               | Toxic Air Contaminant  |
| Temp              | Temperature  |
| THC               | Total Hydrocarbons   |
| tpy               | Tons per year  |
| µg                | Microgram  |
| µm                | Micrometer or Micron   |
| VOC               | Volatile Organic Compounds                                       |
| yr                | Year   |

## GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

## EMISSION UNIT SPECIAL CONDITIONS

### EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

| <b>Emission Unit ID</b> | <b>Emission Unit Description<br/>(Including Process Equipment &amp; Control<br/>Device(s))</b>  | <b>Installation<br/>Date /<br/>Modification<br/>Date</b> | <b>Flexible Group ID</b> |
|-------------------------|---|--|--------------------------|
| EU002                   | Bun Oven. A natural gas fired oven used for baking buns with a capacity of 4,920,000 Btu/hr.  | 01-29-2010 /<br>02-25-2021 /<br>Date of PTI<br>Issuance  | FGOVENS                  |
| EU003                   | Bread Oven. A natural gas fired oven used for baking bread with a capacity of 7,290,000 Btu/hr. Emissions are controlled by a catalytic oxidizer. | 01-29-2010 /<br>02-25-2021 /<br>Date of PTI<br>Issuance  | FGOVENS                  |

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

## FLEXIBLE GROUP SPECIAL CONDITIONS

### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

| <b>Flexible Group ID</b> | <b>Flexible Group Description</b>                      | <b>Associated Emission Unit IDs</b> |
|--------------------------|--|-------------------------------------|
| FGOVENS                  | Two natural gas fired ovens for baking bread and buns. | EU002, EU003                        |

**FGOVENS  
 FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Two natural gas fired ovens for baking bread and buns.

**Emission Unit:** EU002, EU003

**POLLUTION CONTROL EQUIPMENT**

A catalytic oxidizer is used to control emissions from the bread line, EU003.

**I. EMISSION LIMIT(S)**

| <b>Pollutant</b> | <b>Limit</b> | <b>Time Period / Operating Scenario</b>                                      | <b>Equipment</b>         | <b>Monitoring / Testing Method</b> | <b>Underlying Applicable Requirements</b> |
|------------------|--------------|--|--------------------------|------------------------------------|---|
| 1. VOC           | 89.73 tpy    | 12-month rolling time period as determined at the end of each calendar month | All equipment in FGOVENS | SC VI.2                            | R 336.1205(1)(a), R 336.1702(a)           |
| 2. VOC           | 52.95 tpy    | 12-month rolling time period as determined at the end of each calendar month | EU002                    | SC VI.2                            | R 336.1702(a)                             |

**II. MATERIAL LIMIT(S)**

| <b>Material</b>  | <b>Limit</b> | <b>Time Period / Operating Scenario</b>                                      | <b>Equipment</b> | <b>Monitoring / Testing Method</b> | <b>Underlying Applicable Requirements</b> |
|------------------|--------------|--|------------------|------------------------------------|---|
| 1. Buns Produced | 14,350 tpy   | 12-month rolling time period as determined at the end of each calendar month | EU002            | SC VI.2                            | R 336.1205 (1)(a), R336.1702(a)           |

2. The permittee shall not exceed a monthly production weighted average emission factor of 7.38 or more pounds of VOC per ton of buns produced in EU002. **(R 336.1205(1)(a), R336.1702(a))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. Catalytic Oxidizer Bypass Episode: the permittee may operate EU003 without the catalytic oxidizer installed, maintained, and operated in a satisfactory manner in the event that the catalytic oxidizer malfunctions during a batch until EU003 completes the batch. Upon completion of the batch, the permittee shall not operate EU003 until the catalytic oxidizer has been repaired. **(R 336.1225, R 336.1702(a), R 336.1910)**

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate EU003 unless the catalytic oxidizer is installed, maintained, and operated in a satisfactory manner, except as specified in SC III.1. Satisfactory operation of the catalytic oxidizer includes a minimum VOC capture efficiency of 95 percent (by weight), a minimum VOC destruction efficiency of 95 percent (by weight), and a minimum catalyst bed inlet temperature of 600°F **(R 336.1205, R 336.1225, R 336.1702, R 336.1910)**

2. Except as specified in SC III.1, the permittee shall install, calibrate, maintain, and operate in a satisfactory manner, a temperature monitoring device to continuously monitor and record the inlet and outlet temperatures of the catalytic oxidizer catalyst bed. **(R 336.1205, R 336.1225, R 336.1702)**
3. Except as specified in SC III.1, upon bypass of the oxidizer, the permittee shall initiate an immediate shutdown, consistent with safe operating practices, of EU003. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702)**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Upon request of the AQD District Supervisor, the permittee shall verify the VOC destruction efficiency of the catalytic oxidizer for EU003, by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of destruction efficiency includes the submittal of a complete report of the test results, including calculations demonstrating the destruction efficiency, to the AQD within 60 days following the last date of the test. **(R 336.1205, R 336.1702, R 336.2001, R 336.2003, R 336.2004)**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.702(a))**
2. The permittee shall keep, using the tables in Appendix A or another method acceptable to the AQD District Supervisor, the following information on a monthly basis for FGOVENS:
  - a) For each variety of bread and bun produced at the facility, the VOC emission factor, determined using the method described in the USEPA Document No.453/R-92-017 "Alternative Control Technology Document for Bakery Oven Emissions, December 1992" for VOC emissions from bread fermentation or another method acceptable to the AQD District Supervisor.
  - b) The amount, in tons, of each variety of bread and each variety of buns produced per calendar month.
  - c) VOC mass emission calculations from bread and bun production, using the VOC emission factor for each variety of bread and bun produced, determining the monthly emission rate in tons per calendar month.
  - d) The monthly production weighted VOC emission factor for bread and for buns for each calendar month, using the monthly production records and monthly VOC emission rate records.
  - e) The total amount of bread produced, in tons, per calendar month and per 12-month rolling time period as determined at the end of each calendar month.
  - f) The total amount of buns produced, in tons, per calendar month and 12-month rolling time period as determined at the end of each calendar month.
  - g) VOC mass emission calculations from bread and bun production, using the monthly production weighted emission factor for buns, the monthly production weighted emission factor for bread, and the monthly production records, determining the monthly emission rate in tons per calendar month.
  - h) Total VOC mass emission calculations from bread and bun production determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a))**

3. The permittee shall monitor and record, in a satisfactory manner, the inlet and outlet temperatures of the catalytic oxidizer catalyst bed, on a continuous basis, during operation of EU003. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a)(ii), R 336.1225, R 336.1702)**
4. The permittee shall keep, in a satisfactory manner, records of the number of oxidizer bypass episodes per calendar month and 12-month rolling time period as determined at the end of each calendar month. The permittee shall also record the duration, in hours, of each oxidizer bypass episode, a description of the malfunction, and any steps taken to remedy the malfunction. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

**VII. REPORTING**

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of the catalytic oxidizer. **(R 336.1201(7)(a))**
2. The permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of any malfunctions of the catalytic oxidizer. Notification includes the date, time, duration of the bypass, and actions taken to resolve the malfunction. **(R 336.1201(7)(a))**

**VIII. STACK/VENT RESTRICTION(S)**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

| <b>Stack &amp; Vent ID</b>        | <b>Maximum Exhaust Diameter / Dimensions (inches)</b> | <b>Minimum Height Above Ground (feet)</b> | <b>Underlying Applicable Requirements</b> |
|-----------------------------------|---|---|---|
| 1.SV002<br>(EU002 Stack)          | 16  | 33  | R 336.1225<br>40 CFR 52.21 (c) & (d)      |
| 2.SV003<br>(EU003 Oxidizer Stack) | 16  | 32  | R 336.1225<br>40 CFR 52.21 (c) & (d)      |

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

## FGFACILITY CONDITIONS

### DESCRIPTION

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

### POLLUTION CONTROL EQUIPMENT

NA

#### I. EMISSION LIMIT(S)

| <b>Pollutant</b>   | <b>Limit</b>       | <b>Time Period / Operating Scenario</b>                                      | <b>Equipment</b> | <b>Monitoring / Testing Method</b> | <b>Underlying Applicable Requirements</b> |
|--|--------------------|--|------------------|------------------------------------|---|
| 1. VOC*  | Less than 89.9 tpy | 12-month rolling time period as determined at the end of each calendar month | FGFACILITY       | SC VI.3                            | R 336.1205(1)                             |
| *The enforceable restrictions that are associated with SC I.3 are found in FGFACILITY and in the special conditions for FGOVENS. |                    |  |                  |                                    |   |

#### II. MATERIAL LIMIT(S)

NA

#### III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

#### IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

#### V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

#### VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.
2. The permittee shall keep monthly natural gas usage records, in a format acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used in FGFACILITY. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1))**
3. The permittee shall calculate the VOC emission rate from FGFACILITY monthly, for the preceding 12-month rolling time period, using the calculated emissions from bread and bun production, the natural gas usage records, the natural gas emission factor, and VOC emissions from any other equipment at the facility or an

alternate method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(1))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).





**Table 3: Recordkeeping for Monthly Production**

| Month: | Year:                      |   |
|--------|----------------------------|---|
|        | VOC Emissions (tons/month) | VOC Emissions (tons/12-month rolling time period) |
| Bread  |                            |   |
| Buns   |                            |   |
| Total  |                            |   |