

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

September 27, 2022

PERMIT TO INSTALL
206-08J

ISSUED TO
Keebler Company

LOCATED AT
310 28th Street, SE
Grand Rapids, Michigan 49548

IN THE COUNTY OF
Kent

STATE REGISTRATION NUMBER
B4395

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: August 26, 2022	
DATE PERMIT TO INSTALL APPROVED: September 27, 2022	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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ 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 ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	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 ₂	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.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUOVEN1B	An 11.58 MMBtu/hr natural gas fired oven used in the baking process which emits VOCs.	01-01-2011 / 02-20-2019 / 09-27-2022	NA
EUOVEN2	A 9.6 MMBtu/hr natural gas fired oven used in the baking process which emits VOCs.	01-01-1986 / 01-01-2010 / 02-20-2019 / 09-27-2022	NA
EUOVEN4	A 15.0 MMBtu/hr natural gas fired oven used in the baking process which emits ammonia and VOCs.	01-01-1998 / 03-16-18 / 02-20-2019 / 09-27-2022	NA
EUOVEN5	A 15.0 MMBtu/hr natural gas fired oven used in the baking process which emits ammonia and VOCs.	01-01-1976 / 03-16-18 / 02-20-2019 / 09-27-2022	NA
EUOVEN6	A 15.7 MMBtu/hr natural gas fired oven used in the baking process which emits ammonia and VOCs.	01-01-2006 / 03-16-2018 / 02-20-2019 / 01-14-2021 / 09-27-2022	NA
EUOVEN7	An 11.0 MMBtu/hr natural gas fired oven used in the baking process. Emissions are VOC in nature.	01-01-1979 / 02-15-13 / 02-20-2019 / 09-27-2022	NA
EUDEHUM	A desiccant dryer for facility's compressed air supply with a 0.4 MMBtu/hr direct-fired natural gas burner for desiccant regeneration.	01-01-2011	NA

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.

**EUOVEN1B
 EMISSION UNIT CONDITIONS**

DESCRIPTION

An 11.58 MMBtu/hr natural gas fired oven used in the baking process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	25.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN1B	SC VI.3	R 336.1225, R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste food ingredient and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing food ingredients in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

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))**

1. Upon request from the District Supervisor, the permittee shall verify the VOC content of any food ingredient by testing at owner's expense, in accordance with Department requirements. The test shall use a method approved by the District Supervisor as appropriate for the nature of the material to be tested. If the test results and the formulation values should differ, the permittee shall use the test results to determine compliance. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**
2. Upon request from AQD District Supervisor, the permittee shall verify the emittance rate from EUOVEN1B for 2,3 pentanedione (CAS No. 600-14-6), glycerin (CAS No. 56-81-5), triacetin (CAS No. 102-76-1), 2 ethyl pyrazine (CAS No. 13925-00-3), and lactic acid (CAS No. 50-21-5) by testing at the 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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(3), R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each VOC-containing food ingredient used in EUOVEN1B. The permittee shall maintain the following information:
 - a) Food ingredient ID Number.
 - b) The amount of each VOC constituent contained within the food ingredient, in percent by weight.
 - c) VOC content of the food ingredient, in percent by weight.
 - d) Content of the following compound in each food ingredient in percent by weight:
 - i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).

The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by 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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep the following information on a monthly basis for EUOVEN1B:
 - a) Amount of each VOC-containing food ingredient used.
 - b) Effective VOC content of each food ingredient used. The effective VOC content shall be calculated using the following equation:
$$\text{VOC}_{\text{eff}} = E + \sum_{i=1}^n (\text{PG}_i * R_i)$$
Where:
 - VOC_{eff} = Effective VOC content of the Food ingredient (%)
 - E = Percent content of all VOC constituents besides those listed in SC VI.2d (%)
 - PG_i = Percent of each compound listed in SCVI.2d of food ingredient (%)
 - R_i = Emittance rate of each compound listed in SCVI.2d (%)

The emittance rate (R_i) for each compound shall be as follows.

- i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).
- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month as calculated using the following equation:

$$\text{VOC}_m = \left[\sum_{i=1}^n (M_i \times \text{VOC}_{\text{eff}_i}) \right] \div 2000 + C$$

Where:

- VOC_m = Oven 1B monthly VOC emission rate in tons per month
- M_i = Food ingredient usage, in pounds per month, for food ingredient i
- VOC_{eff, i} = Effective VOC content (%) for food ingredient i
- C = Potential VOC emissions, in tons per month, from natural gas combustion
- n = Total number of food ingredients used

d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

$$VOC_a = \left[\sum_{i=1}^{12} VOC_{m,i} \right]$$

Where:

- VOC_a = Oven 1B annual VOC emission rate in tons per 12-month rolling time period
- VOC_{m,i} = Oven 1B monthly VOC emission rate in tons per month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1225, R 336.1702(a))

VII. REPORTING

NA

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:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-OV1B-1/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-OV1B-2/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-OV1B-3/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-OV1B-4/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-OV1B-5/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-OV1B-6/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-OV1B-7/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-OV1B-8/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-OV1B-9/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
10. SV-OV1B-10/11	8.0	25.8	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV-OV1B-11/11	10.0	19.5	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

**EUOVEN2
 EMISSION UNIT CONDITIONS**

DESCRIPTION

A 9.6 MMBtu/hr natural gas fired oven used in the baking process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	25.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN2	SC VI.3	R 336.1225, R 336.1702(a)
2. Acetoin (CAS No. 513-86-0)	0.8 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN2	SC VI.4	R 336.1225(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste food ingredient and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing food ingredients in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

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))**

1. Upon request from the District Supervisor, the permittee shall verify the VOC content of any food ingredient by testing at owner's expense, in accordance with Department requirements. The test shall use a method approved by the District Supervisor as appropriate for the nature of the material to be tested. If the test results and the formulation values should differ, the permittee shall use the test results to determine compliance. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**
2. Within 180 days after commencement of PTI issuance, the permittee shall verify the emittance rate from EUOVEN2 for 2,3 pentanedione (CAS No. 600-14-6), glycerin (CAS No. 56-81-5), triacetin

(CAS No. 102-76-1), 2 and ethyl pyrazine (CAS No. 13925-00-3) by testing at the 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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(3), R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each VOC-containing food ingredient used in EUOVEN2. The permittee shall maintain the following information:
 - a) Food ingredient ID Number.
 - b) The amount of each VOC constituent contained within the food ingredient, in percent by weight.
 - c) VOC content of the food ingredient, in percent by weight.
 - d) Content of the following compound in each food ingredient in percent by weight:
 - i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).

The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by 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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep the following information on a monthly basis for EUOVEN2:
 - a) Amount of each VOC-containing food ingredient used.
 - b) Effective VOC content of each food ingredient used. The effective VOC content shall be calculated using the following equation:
$$\text{VOC}_{\text{eff}} = E + \sum_{i=1}^n (\text{PG}_i * R_i)$$
Where:
 - VOC_{eff} = Effective VOC content of the Food ingredient (%)
 - E = Percent content of all VOC constituents besides those listed in SC VI.2d (%)
 - PG_i = Percent of each compound listed in SCVI.2d of food ingredient (%)
 - R_i = Emittance rate of each compound listed in SCVI.2d (%)

The emittance rate (R_i) for each compound shall be as follows.

- i. 2,3 pentanedione (CAS No. 600-14-6),
- ii. propylene glycol (CAS No. 57-55-6),
- iii. glycerin (CAS No. 56-81-5),
- iv. triacetin (CAS No. 102-76-1),
- v. 2 ethyl pyrazine (CAS No. 13925-00-3),
- vi. lactic acid (CAS No. 50-21-5).

- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month as calculated using the following equation:

$$VOC_m = \left[\sum_{i=1}^n (M_i \times VOC_{eff,i}) \right] \div 2000 + C$$

Where:

- VOC_m = Oven 2 monthly VOC emission rate in tons per month
 M_i = Food ingredient usage, in pounds per month, for food ingredient i
 VOC_{eff, i} = Effective VOC content (%) for food ingredient i
 C = Potential VOC emissions, in tons per month, from natural gas combustion
 n = Total number of food ingredients used

- d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

$$VOC_a = \left[\sum_{i=1}^{12} VOC_{m,i} \right]$$

Where:

- VOC_a = Oven 2 annual VOC emission rate in tons per 12-month rolling time period
 VOC_{m,i} = Oven 2 monthly VOC emission rate in tons per month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

4. The permittee shall keep the following information on calendar month basis for EUOVEN2:
- The amount of each acetoin (CAS No. 513-86-0) containing food ingredient used.
 - The acetoin (CAS No. 513-86-0) content, in weight percent, of each food ingredient used.
 - The acetoin (CAS No. 513-86-0) mass emission calculations determining the monthly emission rate in tons per calendar month.
 - The acetoin (CAS No. 513-86-0) mass emission calculations 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 the records using mass balance, or an alternative method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.¹ **(R 336.1225(1))**

VII. REPORTING

NA

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:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-OV2-1/7	13.8	25.6	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-OV2-2/7	13.8	25.6	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
3. SV-OV2-3/7	13.8	27.6	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-OV2-4/7	13.8	25.6	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-OV2-5/7	13.8	25.6	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-OV2-6/7	13.8	27.6	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-OV2-7/7	13.8	25.6	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

**EUOVEN4
EMISSION UNIT CONDITIONS**

DESCRIPTION

A 15.0 MMBtu/hr natural gas fired oven used in the baking process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	5.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN4	SC VI.3	R 336.1225, R 336.1702(a)
2. Ammonia	9.3 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EUOVEN4	SC VI.4	R 336.1224, R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste food ingredients and ammonium bicarbonate and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing food ingredients and ammonium bicarbonate in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

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))**

1. Upon request from the District Supervisor, the permittee shall verify the VOC content of any food ingredient by testing at owner's expense, in accordance with Department requirements. The test shall use a method approved by the District Supervisor as appropriate for the nature of the material to be tested. If the test results and the formulation values should differ, the permittee shall use the test results to determine compliance. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**
2. Upon request from AQD District Supervisor, the permittee shall verify the emittance rate from EUOVEN4 for 2,3 pentanedione (CAS No. 600-14-6), glycerin (CAS No. 56-81-5), triacetin (CAS No. 102-76-1), 2 ethyl pyrazine (CAS No. 13925-00-3), and lactic acid (CAS No. 50-21-5) by testing at the 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each VOC-containing food ingredient used in EUOVEN4. The permittee shall maintain the following information:
 - a) Food ingredient ID Number.
 - b) The amount of each VOC constituent contained within the food ingredient, in percent by weight.
 - c) VOC content of the food ingredient, in percent by weight.
 - d) Content of the following compound in each food ingredient in percent by weight:
 - i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).

The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by 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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep the following information on a monthly basis for EUOVEN4:
 - a) Amount of each VOC-containing food ingredient used.
 - b) Effective VOC content of each food ingredient used. The effective VOC content shall be calculated using the following equation:
$$\text{VOC}_{\text{eff}} = E + \sum_{i=1}^n (\text{PG}_i * \text{R}_i)$$
Where:
 - VOC_{eff} = Effective VOC content of the Food ingredient (%)
 - E = Percent content of all VOC constituents besides those listed in SC VI.2d (%)
 - PG_i = Percent of each compound listed in SCVI.2d of food ingredient (%)
 - R_i = Emittance rate of each compound listed in SCVI.2d (%)

The emittance rate (R_i) for each compound shall be as follows.

- i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).
- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month as calculated using the following equation:

$$\text{VOC}_m = \left[\sum_{i=1}^n (M_i \times \text{VOC}_{\text{eff},i}) \right] \div 2000 + C$$

Where:

VOC_m = Oven 4 monthly VOC emission rate in tons per month

M_i = Food ingredient usage, in pounds per month, for food ingredient i

$\text{VOC}_{\text{eff},i}$ = Effective VOC content (%) for food ingredient i

C = Potential VOC emissions, in tons per month, from natural gas combustion

n = Total number of food ingredients used

- d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

$$\text{VOC}_a = \left[\sum_{i=1}^{12} \text{VOC}_{m,i} \right]$$

Where:

VOC_a = Oven 4 annual VOC emission rate in tons per 12-month rolling time period

$\text{VOC}_{m,i}$ = Oven 4 monthly VOC emission rate in tons per month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

4. The permittee shall keep the following information on a monthly basis for EUOVEN4:

a) The amount of ammonium bicarbonate used.

b) Ammonia mass emission calculations determining the monthly emission rate in tons per calendar month, as calculated using the following equation:

$$\text{NH}_{3m} = (M \times 0.2154) \div 2000$$

Where:

NH_{3m} = Oven 4 monthly ammonia emission rate in tons per calendar month

M = Ammonium bicarbonate usage in pounds per month

- c) Ammonia mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month, as calculated using the following equation:

$$\text{NH}_{3a} = \left[\sum_{i=1}^{12} (\text{NH}_3)_{m,i} \right]$$

Where:

NH_{3a} = Oven 4 annual emission rate in tons per 12-month rolling time period

$(\text{NH}_3)_{m,i}$ = Oven 4 monthly ammonia emission rate in tons per calendar month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.¹ **(R 336.1224, R 336.1225)**

VII. REPORTING

NA

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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-OV4-1/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-OV4-2/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-OV4-3/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-OV4-4/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-OV4-5/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-OV4-6/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-OV4-7/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-OV4-8/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-OV4-9/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-OV4-10/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV-OV4-11/11	12	43.1	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

Footnotes:

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

**EUOVEN5
EMISSION UNIT CONDITIONS**

DESCRIPTION

A 15.0 MMBtu/hr natural gas fired oven used in the baking process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	20.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN5	SC VI.3	R 336.1225, R 336.1702(a)
2. Ammonia	9.3 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EUOVEN5	SC VI.4	R 336.1224, R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste food ingredients and ammonium bicarbonate and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing food ingredients and ammonium bicarbonate materials in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

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))**

1. Upon request from the District Supervisor, the permittee shall verify the VOC content of any food ingredient by testing at owner's expense, in accordance with Department requirements. The test shall use a method approved by the District Supervisor as appropriate for the nature of the material to be tested. If the test results and the formulation values should differ, the permittee shall use the test results to determine compliance. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**
2. Upon request from AQD District Supervisor, the permittee shall verify the emittance rate from EUOVEN5 for 2,3 pentanedione (CAS No. 600-14-6), glycerin (CAS No. 56-81-5), triacetin (CAS No. 102-76-1), 2 ethyl pyrazine (CAS No. 13925-00-3), and lactic acid (CAS No. 50-21-5) by testing at the 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each VOC-containing food ingredient used in EUOVEN5. The permittee shall maintain the following information:
 - a) Food ingredient ID Number.
 - b) The amount of each VOC constituent contained within the food ingredient, in percent by weight.
 - c) VOC content of the food ingredient, in percent by weight.
 - d) Content of the following compound in each food ingredient in percent by weight:
 - i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).

The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by 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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep the following information on a monthly basis for EUOVEN5:
 - a) Amount of each VOC-containing food ingredient used.
 - b) Effective VOC content of each food ingredient used. The effective VOC content shall be calculated using the following equation:
$$\text{VOC}_{\text{eff}} = E + \sum_{i=1}^n (\text{PG}_i * \text{R}_i)$$
Where:
 - VOC_{eff} = Effective VOC content of the Food ingredient (%)
 - E = Percent content of all VOC constituents besides those listed in SC VI.2d (%)
 - PG_i = Percent of each compound listed in SCVI.2d of food ingredient (%)
 - R_i = Emittance rate of each compound listed in SCVI.2d (%)

The emittance rate (R_i) for each compound shall be as follows.

- i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).
- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month as calculated using the following equation:

$$VOC_m = \left[\sum_{i=1}^n (M_i \times VOC_{eff,i}) \right] \div 2000 + C$$

Where:

- VOC_m = Oven 5 monthly VOC emission rate in tons per month
- M_i = Food ingredient usage, in pounds per month, for food ingredient i
- VOC_{eff, i} = Effective VOC content (%) for food ingredient i
- C = Potential VOC emissions, in tons per month, from natural gas combustion
- n = Total number of food ingredients used

- d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

$$VOC_a = \left[\sum_{i=1}^{12} VOC_{m,i} \right]$$

Where:

- VOC_a = Oven 5 annual VOC emission rate in tons per 12-month rolling time period
- VOC_{m,i} = Oven 5 monthly VOC emission rate in tons per month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1225, R 336.1702(a))

VII. REPORTING

NA

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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-OV5-1/12	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-OV5-2/12	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-OV5-3/12	12	28.6	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-OV5-4/12	12	28.6	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-OV5-5/12	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-OV5-6/12	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-OV5-7/12	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-OV5-8/12	12	28.6	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-OV5-9/12	12	28.6	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
10. SV-OV5-10/12	12	28.6	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV-OV5-11/12	12	43.5	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV-OV5-12/12	12	23.7	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

Footnotes:

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

**EUOVEN6
EMISSION UNIT CONDITIONS**

DESCRIPTION

A 15.7 MMBtu/hr natural gas fired oven used in the baking process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	29.5 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN6	SC VI.3	R 336.1225, R 336.1702(a)
2. Ammonia	21.0 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EUOVEN6	SC VI.4	R 336.1224, R 336.1225

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste food ingredients and ammonium bicarbonate and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing food ingredients and ammonium bicarbonate in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

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))**

1. Upon request from the District Supervisor, the permittee shall verify the VOC content of any food ingredient by testing at owner's expense, in accordance with Department requirements. The test shall use a method approved by the District Supervisor as appropriate for the nature of the material to be tested. If the test results and the formulation values should differ, the permittee shall use the test results to determine compliance. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**
2. Upon request from AQD District Supervisor, the permittee shall verify the emittance rate from EUOVEN6 for 2,3 pentanedione (CAS No. 600-14-6), glycerin (CAS No. 56-81-5), triacetin (CAS No. 102-76-1), 2 ethyl pyrazine (CAS No. 13925-00-3), and lactic acid (CAS No. 50-21-5) by testing at the 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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(3), R 336.1224, R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each VOC-containing food ingredient used in EUOVEN6. The permittee shall maintain the following information:
 - a) Food ingredient ID Number.
 - b) The amount of each VOC constituent contained within the food ingredient, in percent by weight.
 - c) VOC content of the food ingredient, in percent by weight.
 - d) Content of the following compound in each food ingredient in percent by weight:
 - i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).

The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by 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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep the following information on a monthly basis for EUOVEN6:
 - a) Amount of each VOC-containing food ingredient used.
 - b) Effective VOC content of each food ingredient used. The effective VOC content shall be calculated using the following equation:
$$\text{VOC}_{\text{eff}} = E + \sum_{i=1}^n (\text{PG}_i * \text{R}_i)$$
Where:
 - VOC_{eff} = Effective VOC content of the Food ingredient (%)
 - E = Percent content of all VOC constituents besides those listed in SC VI.2d (%)
 - PG_i = Percent of each compound listed in SCVI.2d of food ingredient (%)
 - R_i = Emittance rate of each compound listed in SCVI.2d (%)

The emittance rate (R_i) for each compound shall be as follows.

- i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).
- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month as calculated using the following equation:

$$VOC_m = \left[\sum_{i=1}^n (M_i \times VOC_{eff,i}) \right] \div 2000 + C$$

Where:

VOC_m = Oven 6 monthly VOC emission rate in tons per month

M_i = Food ingredient usage, in pounds per month, for food ingredient i

$VOC_{eff,i}$ = Effective VOC content (%) for food ingredient i

C = Potential VOC emissions, in tons per month, from natural gas combustion

n = Total number of food ingredients used

- d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

$$VOC_a = \left[\sum_{i=1}^{12} VOC_{m,i} \right]$$

Where:

VOC_a = Oven 6 annual VOC emission rate in tons per 12-month rolling time period

$VOC_{m,i}$ = Oven 6 monthly VOC emission rate in tons per month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

4. The permittee shall keep the following information on a monthly basis for EUOVEN6:

a) The amount of ammonium bicarbonate used.

b) Ammonia mass emission calculations determining the monthly emission rate in tons per calendar month, as calculated using the following equation:

$$NH_{3m} = (M \times 0.2154) \div 2000$$

Where:

NH_{3m} = Oven 6 monthly ammonia emission rate in tons per calendar month

M = Ammonium bicarbonate usage in pounds per month

c) Ammonia mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month, as calculated using the following equation:

$$NH_{3a} = \left[\sum_{i=1}^{12} (NH_3)_{m,i} \right]$$

Where:

NH_{3a} = Oven 6 annual emission rate in tons per 12-month rolling time period

$NH_{3m,i}$ = Oven 6 monthly ammonia emission rate in tons per calendar month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.¹ **(R 336.1224, R 336.1225)**

VII. REPORTING

NA

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:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-OV6-2/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-OV6-3/11	12	30.1	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-OV6-4/11	12	30.1	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-OV6-5/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-OV6-6/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-OV6-7/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-OV6-8/11	12	22.6	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-OV6-9/11	12	30.1	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-OV6-10/11	12	30.1	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-OV6-11/11	12	41.6	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.¹ **(R 336.1225(4))**

Footnotes:

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

**EUOVEN7
EMISSION UNIT CONDITIONS**

DESCRIPTION

An 11.0 MMBtu/hr natural gas fired oven used in the baking process.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	25.0 tpy	12-month rolling time period as determined at the end of each calendar month	EUOVEN7	SC VI.3	R 336.1225, R 336.1702(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall capture all waste food ingredients and ammonium bicarbonate and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a))**
2. The permittee shall handle all VOC containing food ingredients and ammonium bicarbonate in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a))**

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))**

1. Upon request from the District Supervisor, the permittee shall verify the VOC content of any food ingredient by testing at owner's expense, in accordance with Department requirements. The test shall use a method approved by the District Supervisor as appropriate for the nature of the material to be tested. If the test results and the formulation values should differ, the permittee shall use the test results to determine compliance. **(R 336.1205(3), R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2040(5))**
2. Upon request from AQD District Supervisor, the permittee shall verify the emittance rate from EUOVEN7 for 2,3 pentanedione (CAS No. 600-14-6), glycerin (CAS No. 56-81-5), triacetin (CAS No. 102-76-1), 2 ethyl pyrazine (CAS No. 13925-00-3), and lactic acid (CAS No. 50-21-5) by testing at the 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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(3), R 336.1225, R 336.1702(a))**
2. The permittee shall maintain a current listing from the manufacturer of the chemical composition of each VOC-containing food ingredient used in EUOVEN7. The permittee shall maintain the following information:
 - a) Food ingredient ID Number.
 - b) The amount of each VOC constituent contained within the food ingredient, in percent by weight.
 - c) VOC content of the food ingredient, in percent by weight.
 - d) Content of the following compound in each food ingredient in percent by weight:
 - i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).

The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by 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(3), R 336.1225, R 336.1702(a))**

3. The permittee shall keep the following information on a monthly basis for EUOVEN7:
 - a) Amount of each VOC-containing food ingredient used.
 - b) Effective VOC content of each food ingredient used. The effective VOC content shall be calculated using the following equation:
$$\text{VOC}_{\text{eff}} = E + \sum_{i=1}^n (\text{PG}_i * R_i)$$
Where:
$$\text{VOC}_{\text{eff}} = \text{Effective VOC content of the Food ingredient (\%)} \\ E = \text{Percent content of all VOC constituents besides those listed in SC VI.2d (\%)} \\ \text{PG}_i = \text{Percent of each compound listed in SCVI.2d of food ingredient (\%)} \\ R_i = \text{Emittance rate of each compound listed in SCVI.2d (\%)} \\$$

The emittance rate (R_i) for each compound shall be as follows.

- i. 2,3 pentanedione (CAS No. 600-14-6),
 - ii. propylene glycol (CAS No. 57-55-6),
 - iii. glycerin (CAS No. 56-81-5),
 - iv. triacetin (CAS No. 102-76-1),
 - v. 2 ethyl pyrazine (CAS No. 13925-00-3),
 - vi. lactic acid (CAS No. 50-21-5).
- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month as calculated using the following equation:

$$\text{VOC}_m = \left[\sum_{i=1}^n (M_i \times \text{VOC}_{\text{eff}_i}) \right] \div 2000 + C$$

Where:

- VOC_m = Oven 7 monthly VOC emission rate in tons per month
- M_i = Food ingredient usage, in pounds per month, for food ingredient i
- VOC_{eff, i} = Effective VOC content (%) for food ingredient i
- C = Potential VOC emissions, in tons per month, from natural gas combustion
- n = Total number of food ingredients used

d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

$$VOC_a = \left[\sum_{i=1}^{12} VOC_{m,i} \right]$$

Where:

- VOC_a = Oven 7 annual VOC emission rate in tons per 12-month rolling time period
- VOC_{m,i} = Oven 7 monthly VOC emission rate in tons per month for month i

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. (R 336.1225, R 336.1702(a))

VII. REPORTING

NA

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:

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-OV7-1/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-OV7-2/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-OV7-3/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-OV7-4/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-OV7-5/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-OV7-6/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-OV7-7/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-OV7-8/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-OV7-9/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-OV7-10/12	12	39.6	R 336.1225, 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
11. SV-OV7-11/12	12	48.0	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV-OV7-12/12	12	59.0	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

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)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOCs	Less than 90.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.3	R 336.1205(3)
2. VOCs	2090 lb/day	Calendar day	FGFACILITY	SC VI.2	R 336.1205(1)(a)
3. Benzaldehyde (CAS No. 100-52-7)	1.1 tpy ¹	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.4	R 336.1225(2)
4. Acetaldehyde (CAS No. 75-07-0)	0.9 tpy ¹	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.4	R 336.1225(2)

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. **(R 336.1205(3))**
2. The permittee shall keep the following information on a daily basis for FGFACILITY:
 - a) Amount of each VOC-containing food ingredient used, in gallons or pounds.
 - b) Where applicable, gallons or pounds of each VOC-containing food ingredient reclaimed.

- c) VOC emission calculations determining the daily emission rate in pounds per calendar day using the following equation:

$$VOC_d = \left[\sum_{i=1}^n (D_i \times VOC_i) \right] + (EV_d)$$

Where:

VOC_d = Daily VOC emission rate in pounds per calendar day

D_i = Food ingredient usage, in pounds per day, for food ingredient i

VOC_i = VOC content for food ingredient i.

EV_d = Daily VOC emissions, in pounds per calendar day, from all activities other than food ingredient usage.

n = Total number of food ingredients used

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

3. The permittee shall keep the following information on a monthly basis for FGFACILITY:
- The amount of VOC emissions, in tons per calendar month, from all VOC-containing food ingredients used.
 - The amount of VOC emissions, in tons per calendar month, from all activities other than food ingredient usage.
 - The amount of VOC emissions, in tons per calendar month, from all activities (including food ingredient usage) combined.
 - The amount of VOC emissions, in tons per 12-month rolling time period as determined at the end of each calendar month, from all activities combined.

The permittee shall keep the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(3))**

4. The permittee shall keep the following information on a monthly basis for FGFACILITY:
- The amount of each benzaldehyde (CAS No. 100-52-7) and acetaldehyde (CAS No. 75-07-0) containing food ingredient used.
 - The benzaldehyde (CAS No. 100-52-7) and acetaldehyde (CAS No. 75-07-0) content, in weight percent, of each food ingredient used.
 - Benzaldehyde (CAS No. 100-52-7) and acetaldehyde (CAS No. 75-07-0) mass emission calculations determining the monthly emission rate in tons per calendar month.
 - Benzaldehyde (CAS No. 100-52-7) and acetaldehyde (CAS No. 75-07-0) mass emission calculations 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 the records using mass balance or an alternate method and format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.¹ **(R 336.1225(2))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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