217/785-1705

CONSTRUCTION PERMIT

PERMITTEE

Pepperidge Farm, Incorporated
Attn: Daniel Rozycki
230 Second Street
Downers Grove, Illinois 60515

I.D. No.: 043030ADW
Application No.: 26020013
Date Received: February 13, 2026
Date Issued: DRAFT June 2, 2026
Subject: Baking Line 2 and Catalytic Oxidizer
Location: 230 Second Street, Downers Grove, DuPage County

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a new baking oven and catalytic oxidizer, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Description

a. i. This permit authorizes the construction of one new baking line (Baking Line 2) consisting of a natural gas-fired, direct-fired tunnel baking hearth oven and associated proofing. The majority of emissions from the baking line would be volatile organic material (VOM), mainly ethanol, as it is formed biologically by the yeast that is used to leaven the dough. VOM is emitted when the dough is proofed within the proofer and baked within the oven. Emissions of VOM and hazardous air pollutants (HAPs) from the oven would be controlled by a new natural gas-fired catalytic oxidizer.

ii. For the purposes of this permit:

A. The proofer is referred to as the “affected proofer.”

B. The tunnel oven is referred to as the “affected baking oven.”

C. The combination of the proofer and the oven are referred to as the “affected baking line.”

D. The catalytic oxidizer and the associated capture system(s) are referred to as “the affected control unit.”

b. As part of the project, the existing Baking Line 2 would be removed. The existing baking line is an uncontrolled baking line.

2. Applicable Emission Standards

a. The affected baking line is subject to 35 IAC 212.123, which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, six-minute average, into the atmosphere from any emission unit, except as provided by 35 IAC 212.123(b) and 35 IAC 212.124.

b. The affected baking line is subject to 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter (PM) into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar new process emission units at a source or premises to exceed the allowable emission rates specified in 35 IAC 212.321(c).

c. The affected baking line is subject to 35 IAC 218.301, which generally provides that no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, 218.304 and the following exception: If no odor nuisance exists this limitation shall apply only to photochemically reactive material as defined in 35 IAC 211.4690.

Note: Ethanol is not a photochemically reactive material pursuant to 35 IAC 211.4690.

3. Non-applicability Provisions

a. This permit is issued based on this project not being a major project for purposes of the state rules for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203.

i. For VOM, this is because the project will not exceed 25 tons/year of VOM when aggregated with all other net increases in emissions of VOM from the source over the period of five consecutive years that includes the year in which such increase occurs, (See Attachment A, Table 1).

ii. For NOx, this is because the source, including this project, is not a major source of NOx emissions (i.e., potential emissions of NOx from the source are less than 50 tons/year).

b. This permit is issued based on this project not being a major project for purposes of the state rules for Prevention of Significant Deterioration (PSD), 35 IAC Part 204. This is because emissions from the source, including this project, would be less than the major stationary source threshold under the PSD rules (i.e., less than 250 tons/year per pollutant).

4. Work Practice and Control Requirements

a. At all times the affected baking line is in operation, the Permittee shall comply with the following requirements:

i. The VOM and HAP emissions of the affected oven shall be controlled by at least 95 percent overall, hourly average, considering both capture of emissions by the enclosure provided by the oven and destruction of emissions by the oxidizer.

ii. Oven Capture Systems:

A. The affected oven shall maintain an inward flow of air through each natural draft opening (NDO). For this purpose, an NDO is any permanent opening in the enclosure that remains open during operation of an oven and is not connected to a duct in which a fan is installed.

B. The affected oven shall be operated under negative pressure.

C. The Permittee shall meet one of the following requirements during all times the affected oven is baking:

I. The pressure differential of the oven shall be continuously monitored, and a negative pressure differential value of at least 0.007 inches of H_2O, on a 15-minute block average, shall be maintained between the interior of the oven and the space in which the oven is located; or

II. The facial velocity of air entering the oven shall be continuously monitored, and an inward velocity of at least 200 feet per minute, on a 15-minute block average, shall be maintained into at least one of the NDOs.

D. The total surface area of all NDOs shall not exceed 5 percent of the surface area of the affected oven's four walls, floor, and ceiling.

E. All non-NDOs shall be closed during routine operation of the affected oven.

iii. Oxidizer:

A. Except as provided by Condition 4(a)(iii)(B) and (C), the Permittee shall operate the oxidizer to comply with an Operating Parameter Limit (OPL), as follows, established based on emission testing of the affected oven conducted in accordance with Condition 6. For purposes of this permit, an Operating Parameter is a parameter that is to be monitored pursuant to Condition 7(a):

1. The temperature of the flue gas upstream of the oxidizer and the temperature of the flue gas downstream of the oxidizer, hourly average, and the magnitude of the temperature rise across the catalyst bed, hourly average.

B. Until the initial emission testing required by Condition 6 is completed, the Permittee shall operate the oxidizer in accordance with manufacturer's recommended operating procedures.

C. For the purpose of the evaluation of the oxidizer and further performance testing that may set new values for the operating parameter(s) of the oxidizer, the Permittee may operate the oxidizer at operating parameters

values that are different than those that would be required by Condition 4(a)(iii)(A), provided that operation is in accordance with a detailed plan describing the evaluation and testing program that has been submitted to and approved by the Illinois EPA.

b. At all times, the Permittee shall, to the extent practicable, maintain and operate the affected baking line, including the catalytic oxidizer and associated monitoring systems, in a manner consistent with good air pollution control practice for minimizing emissions.

5. Operational and Emissions Limits

a. The production of baked goods by the affected baking line shall not exceed 5,421 tons/month and 54,211 tons/year. Compliance with this annual limit and other annual limits in this permit shall be determined from a running total of 12 consecutive months of data.

b. The VOM emissions of the affected oven shall not exceed 0.49 pounds of VOM per ton of baked goods produced.

c. i. The VOM emissions of the affected proofer shall not exceed 2.9 tons/month and 29.2 tons/year.

ii. The acetaldehyde emissions of the affected proofer shall not exceed 0.15 tons/month and 1.5 tons/year.

d. i. The VOM emissions of the affected oven shall not exceed 1.33 tons/month and 13.3 tons/year.

ii. The acetaldehyde emissions of the affected oven shall not exceed 0.07 tons/month and 0.7 tons/year.

e. i. Natural gas shall be the only fuel fired in the burners of the affected baking line and oxidizer.

ii. The rated heat input capacity of the burners in the oven for the affected baking line shall not exceed 6.5 mmBtu/hr.

iii. The rated heat input capacity of the affected control unit shall not exceed 1.4 mmBtu/hr.

6. Performance Testing Requirements

a. i. Within 180 days of startup of the affected baking line, the Permittee shall have VOM and HAP emissions testing performed on the affected oven with its affected control unit.

ii. This testing shall be conducted under maximum representative operating conditions, i.e., those conditions that reflect the highest VOM and acetaldehyde emissions reasonably expected to be vented to the oxidizer. These tests shall be designed to determine the emission rates of the affected oven in terms of both

pounds per hour (for VOM and acetaldehyde) and pounds of VOM per ton of baked goods.

iii. This testing shall also include measurements to determine the capture efficiency for VOM and acetaldehyde emissions from the affected oven and the VOM and acetaldehyde destruction efficiency of the associated oxidizer during maximum representative operating conditions, as based on measurements of the catalytic oxidizer inlet and outlet emission concentrations and gas volumetric flow rates in accordance with 35 IAC 218.105(d)(1).

b. The following USEPA methods and procedures shall be used for testing of emissions, as further specified in 35 IAC 218.105(c), (d) and (f), unless use of another method developed or supported by USEPA is approved by the Illinois EPA as part of approval of the test plan.

Location of Sample Points	Method 1
Gas Flow and Velocity	Method 2
Flue Gas Weight	Method 3
Moisture	Method 4
Volatile Organic Material	Method 18, Method 320 or Method 25/25A (w/ethanol used as a calibration gas for RM 25A) as appropriate
Acetaldehyde	USEPA Method 18 or Method 320
Capture Efficiency	Method 204 or ALT-020

c. Testing of the VOM and acetaldehyde destruction efficiency of the catalytic oxidizer shall also be conducted within 60 months after the initial emissions test, as required by Condition 6(a), and every 60 months thereafter. The Permittee must also demonstrate that the capture system meets the requirements in USEPA Method 204 or ALT-020 for a permanent total enclosure during any testing of the control device, pursuant to 35 IAC 218.105(c)(4)(D).

7. <u>Reporting and Notifications Associated with Performance Tests</u>

a. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. The Illinois EPA may, at its discretion, accept protocol less than 60 days prior to testing provided it does not interfere with the Illinois EPA's ability to review and comment on the protocol and does not deviate from the applicable state or federal statutes. This plan shall describe the specific procedures for testing, including as a minimum:

i. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions would be considered maximum representative conditions and the means by which the operating parameters for the emission unit and any control equipment will be determined.

iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.

iv. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods.

v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

b. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

c. The Permittee shall submit the Final Source Test Report(s) for these tests accompanied by a cover letter stating whether or not compliance was shown, to the Illinois EPA, Bureau of Air, Compliance Section Manager within 30 days after the test results are compiled, but no later than 60 days after the date of testing or sampling. The Final Report shall include as a minimum:

i. A summary of results.

ii. General information.

iii. Description of test method(s), including description of sample points sampling train, analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. Process information, including the initial baker's yeast percent and the final spike baker's yeast percent of the dough being baked.

B. Control equipment information, including data monitored pursuant to Condition 8 during the period of testing.

v. Data and calculations, including copies of all raw data sheets, opacity observation records and records of laboratory analyses, sample calculations, and data on equipment calibration.

8. <u>Monitoring and Sampling Requirements</u>

a. i. For the oxidizer, the Permittee shall install, calibrate, maintain and operate continuous monitoring devices according to manufacturer's specifications to monitor the temperature in the flue gas upstream of the catalyst bed, the temperature in the flue gas downstream of the catalyst bed, and the temperature rise across the catalyst bed. These devices shall have an accuracy of ± 1 percent of the temperature measured in °C or ± 0.5°C, whichever is greater, and shall make measurements no less frequently than every 1 minute.

ii. The Permittee shall install, calibrate, operate and maintain in accordance with manufacturer's specifications a continuous electronic recorder to record the continuous data collected by these monitoring devices, and record on an hourly block average, based on the short-term data measured during each hour.

b. For the affected oven, the Permittee shall comply with one of the following options:

i. A. The Permittee shall install, calibrate, maintain and operate a continuous monitoring device according to manufacturer's specifications to monitor the differential pressure (in inches of H_2O) between the interior of the oven and the space in which the oven is located; or

B. The Permittee shall install, calibrate, maintain and operate a continuous monitoring device according to manufacturer's specifications to monitor the facial velocity (in feet per minute) of air entering the oven through at least one of the NDOs.

ii. The devices specified by Conditions 8(b)(i)(A) and (B), above, shall make measurements no less frequently than every 1 minute.

iii. The Permittee shall install, calibrate, operate and maintain in accordance with manufacturer's specifications a continuous electronic recorder to record the continuous data collected by these monitoring devices, and record on a 15-minute block average, based on the short-term data measured during each 15-minute period.

c. The Permittee shall keep a log or other records for the operation and maintenance of these monitoring devices that includes information detailing all routine and non-routine maintenance performed and dates and duration of any outages.

d. i. A. The catalyst in the oxidizer shall be sampled and analyzed to assure that the catalyst has not been poisoned and that the catalyst still has a minimum destruction efficiency of 95%.

B. The first catalyst sampling and core analysis shall be performed within one year of the initial stack test. Thereafter, sampling and analysis shall be performed each year that an Illinois EPA approved stack test was not performed per Condition 6.

ii. The Permittee must develop and implement an inspection and maintenance plan for the oxidizer. The plan must address, at a minimum, the elements specified below:

A. Annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, the Permittee must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations.

B. Monthly external inspection of the oxidizer system, including the burner

assembly and fuel supply lines for problems and, as necessary, adjust the equipment to assure proper air-to-fuel mixtures.

C. Annual internal inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found during the annual internal inspection of the catalyst, the Permittee must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations. If the catalyst bed is replaced and is not of like or better kind and quality as the old catalyst, then the Permittee must conduct a new performance test to determine destruction efficiency according to Condition 6. If a catalyst bed is replaced and the replacement catalyst is of like or better kind and quality as the old catalyst, then a new performance test to determine destruction efficiency is not required and the previously established operating limits for that oxidizer may be used.

9. Recordkeeping Requirements for the Affected Baking Line

a. i. The Permittee shall retain a file or other record with a determination of the maximum controlled VOM and acetaldehyde emissions rate of the affected baking oven for the product or category of product produced (pounds/ton of baked product) by this oven, with supporting documentation and calculations, i.e., stack test results.

ii. The Permittee shall maintain records of the following items for the affected baking line:

A. Amount of product produced on the line (tons/month and tons/year);

B. VOM and acetaldehyde emissions of the affected baking oven with supporting calculations (tons/month and tons/year); and

C. VOM and acetaldehyde emissions of the affected proofer with supporting calculations (tons/month and tons/year).

b. The Permittee shall maintain a file that documents the overall capacity of the burners in the affected oven, if this information is not provided on a nameplate attached to the oven or the burners.

c. The Permittee shall maintain records of material safety data sheets or other documentation for the composition of cleaning materials used to clean the affected baking line.

10. Recordkeeping for the Oxidizer and Capture Systems

a. The Permittee shall maintain logs or other records for the oxidizer that contain the following information:

i. A file that documents the heat input capacity of the oxidizer (mmBtu/hr), if this information is not provided on a nameplate attached to the oxidizer.

ii. An operating log that includes the dates and duration of any outages, when dough

was in the affected baking line.

iii. An inspection, maintenance and repair documents that includes information of formal inspections of the oxidizer and all routine and non-routine maintenance and repairs performed.

b. The Permittee shall maintain the following records related to the affected oven:

i. A. The data obtained by the continuous monitor for pressure differential (inches of H_2O) between the interior of the oven and the space in which the oven is located; or

B. The data obtained by the continuous monitor for facial velocity (feet per minute) of air entering the oven through at least one of the NDOs.

ii. A measurement of the total area of all NDOs (percent of the surface area of the oven's four walls, floor, and ceiling), with supporting documentation and calculations.

c. The Permittee shall keep records of catalyst sampling that were performed in accordance with Condition 8(d).

11. Records Retention

All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

12. Reporting Requirements

a. If there is any deviation or exceedance from the requirements of this permit, the Permittee shall submit a report to the Illinois EPA within 30 days after the deviation or exceedance. The report shall describe the deviation or exceedance, provide the probable cause of the deviation or exceedance, the corrective actions that were taken, and any action taken to prevent future occurrences.

b. The Permittee shall notify the Illinois EPA's Compliance Section of the initial startup date of the affected baking line within 30 days of such date.

i. With this notification, the Permittee shall specify the monitoring approach being used to satisfy the requirements of a PTE for the oven (i.e., whether differential pressure or facial velocity will be monitored to demonstrate compliance).

ii. After this initial notification, the Permittee shall notify the Illinois EPA at least 30 days prior to changing the monitoring approach.

c. The Permittee shall notify the Illinois EPA's Compliance Section of the date that the existing

Line 2 is permanently shut down and removed within 30 days of such date.

13. Other Requirements

The Permittee shall shut down and permanently remove existing Baking Line 2 prior to operation of the affected baking line.

14. Addresses

a. One copy of all required reports and notifications shall be sent to one of the following addresses:

Via USPS
Illinois EPA, Bureau of Air
Compliance Section (MC 40)
2520 West Iles Avenue
P.O. Box 19276
Springfield, IL 62794-9276

Via Other Means
Illinois EPA, Bureau of Air
Compliance Section (MC 40)
2520 West Iles Avenue
Springfield, IL 62704

b. In addition to the paper copy of the test notifications, written test plan and final test report, an electronic copy of the test notifications, written test plan and final test report shall be sent to EPA.BOA.SMU@Illinois.gov or the Permittee may use the Illinois EPA OneDrive Request File or another approved method. Include the facility's ID Number on all correspondence.

15. Authorization to Operate

The affected baking line with associated affected control unit may be operated under this construction permit until the affected baking line and the affected control unit are addressed in the CAAPP Permit. This condition supersedes Standard Condition 6.

If you have any questions on this permit, please contact Joseph Johnson at 217/782-9317.

William D. Marr
Manager, Permit Section
Bureau of Air

WDM:JAJ:

Attachment A

Table 1:
Evaluation of the Aggregate VOM Net Emissions Changes for Purposes of MSSCAM (Tons/Year)[a]

Unit/Operation	Year	VOM
Proofing Operation	2026	29.2
Oven Baking	2026	13.3
Oven Natural Gas Firing	2026	0.16
Catalytic Oxidizer Natural Gas Firing	2026	0.03
Existing Line 2 Process (Shutdown)[b]	2026	-56.79
Existing Line 2 Natural Gas (Shutdown)[b]	2026	-0.01
Net Emission Change:	-	-14.11
De Minimis Emission Rate:	-	25
De Minimis? (Yes/No)	-	No

Table Notes:

a. Pepperidge Farm, Inc. is located in DuPage County which has been designated serious nonattainment for 8-hour ozone. Pursuant to 35 IAC 203.207(d), areas designated serious and severe nonattainment for ozone have major modification threshold set at 25 tons per year (de minimis) for volatile organic material when aggregated with all other net increases in emissions from the source over any period of five consecutive calendar years that includes the year in which such increase occurred.

b. The decrease in emissions from the shutdown of the existing line is based on the average of the actual emissions from this line over the last two calendar years (2024 and 2025).