6 July 2010

Mr. Michael R. Calise
President
Calise & Sons Bakery, Inc.
2 Quality Drive
Lincoln, RI 02865

Dear Mr. Calise:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your application for the installation of process and air pollution control equipment at your 2 Quality Drive facility in Lincoln, RI.

Enclosed is a minor source permit issued pursuant to our review of your application (Approval Nos. 2105-2108).

Should you have any questions concerning this permit, I can be reached at 222-2808, extension 7028.

Sincerely,

Aleida M. Whitney
Air Quality Specialist
Office of Air Resources

cc: Lincoln Building Official

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

MINOR SOURCE PERMIT

CALISE & SONS BAKERY, INC.

APPROVAL NOs. 2105-2108

Pursuant to the provisions of Air Pollution Control Regulation No. 9, this minor source permit is issued to:

Calise & Sons Bakery, Inc.

For the following:

Installation of three bread baking ovens (Approval Nos. 2105-2107) and a CSM Model 33A LoTemp TORVEX™, 3300 scfm catalytic oxidizer (Approval No. 2108). The catalytic oxidizer will treat VOC emissions from the baking ovens.

Located At: *2 Quality Drive, Lincoln*

This permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This permit does not relieve *Calise & Sons Bakery, Inc.* **from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.**

Douglas L. McVay, Acting Chief
Office of Air Resources

Date of issuance

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

Permit Conditions and Emission Limitations

CALISE & SONS BAKERY, INC.

Approval Nos. 2105-2108

A. Emission Limitations:

1. All VOC emissions generated from the baking ovens shall be captured and contained for discharge to the catalytic oxidizer.

2. VOC emissions generated from the baking ovens shall be reduced by 95% or greater. This is to be achieved through a combination of 100% capture of the VOC generated by the baking ovens and 95% destruction of this VOC.

3. The destruction efficiency of the catalytic oxidizer for VOCs shall be at least 95%.

4. The total quantity of VOC emissions discharged to the catalytic oxidizer from the baking ovens shall not exceed 50 lbs. per hour, the maximum loading capacity of the oxidizer.

5. The total quantity of volatile organic compound emissions discharged to the atmosphere from all operations, for the entire facility, shall not exceed 1825 pounds per calendar month, based upon a 12-month rolling average.

B. Operating Requirements

1. The inlet temperature of the catalytic oxidizer shall be maintained at or above 625^{o}F whenever VOC is being discharged to the oxidizer. The owner/operator may request that the minimum temperature be revised if emission testing demonstrates that the 95% destruction efficiency can be achieved at a lower operating temperature.

2. The baking ovens shall each be equipped with an interlock to prevent operation of the oven burners if the inlet temperature of the catalytic oxidizer is less than the temperature specified in Condition B.1.

3. The total volume of air discharged to the catalytic oxidizer from the baking ovens shall not exceed 3300 scfm, the design capacity of the catalytic oxidizer.

4. The catalytic oxidizer shall be operated according to its design specifications whenever the baking ovens are in operation or are emitting air contaminants.

C. Continuous Monitoring

1. The inlet and outlet temperature of the catalytic oxidizer shall be continuously monitored, indicated and recorded. The device must be capable of monitoring temperature with an accuracy of +/-1 percent of the temperature being monitored in degrees Celsius or +/-1 degree Celsius, whichever is greater. The temperature sensor or thermocouple must be installed in the vent stream at the nearest feasible point to the inlet and outlet of the catalyst bed.

   The equipment to continuously monitor the inlet and outlet temperature of the catalytic oxidizer must be calibrated and maintained according to the manufacturer's specifications. The calibration of the chart recorder, data logger or temperature indicator must be verified once per year or the chart recorder, data logger or temperature indicator must be replaced.

2. The temperature rise across the catalyst shall be calculated and recorded.

3. The pressure drop across the catalyst bed shall be continuously monitored and recorded.

4. The catalytic oxidizer and monitoring equipment shall be inspected at least once per month to assure that the control system is operating properly, and that no leaks or malfunctions have occurred or are occurring. The date, time and results shall be recorded.

5. To ensure the ovens are operating under negative pressure, air flow measurements shall be taken in each oven semi-annually and the date, time and measurements shall be recorded. USEPA Alternative Test Method ALT-20 "Negative Pressure Enclosure Qualitative Test Method for Bakery Ovens" may be used to demonstrate capture efficiency of the oven.

D. Emissions Testing

1. Within 180 days of the startup of the catalytic oxidizer, emissions testing shall be conducted to demonstrate compliance with the destruction efficiency requirements of this permit and to quantify emissions of acetaldehyde.

2. An emissions testing protocol shall be submitted to the Office of Air Resources for review at least 60 days prior to the performance of any emissions test. The owner/operator shall provide the Office of Air Resources at least 60 days prior notice of any emissions test.

3. All test procedures used for emissions testing shall be approved by the Office of Air Resources prior to the performance of any emissions test.

4. USEPA Conditional Test Method CTM-042 "Use of Flame Ionization Detector-Methane Cutter Analysis Systems for VOC Compliance Testing of Bakeries" may be used to demonstrate compliance with the destruction efficiency requirement for the catalytic oxidizer.

5. The owner/operator shall install any and all test ports or platforms necessary to conduct the required emissions testing, provide safe access to any platforms and provide the necessary utilities for sampling and testing equipment.

6. All testing shall be conducted under operating conditions deemed acceptable and representative for the purpose of assessing compliance with the applicable emission limitations or air quality standards.

7. A final report of the results of emission testing shall be submitted to the Office of Air Resources no later than 60 days following completion of the testing.

8. All emissions testing must be observed by the Office of Resources or its authorized representatives to be considered acceptable, unless the Office of Air Resources provides authorization to the owner/operator to conduct the testing without an observer present.

E. Record Keeping and Reporting

1. The owner/operator shall collect, record and maintain all of the following information daily for each oven, as well as for the catalytic oxidizer:

   a. The amount of raw product processed;

   b. The name and type of each product baked;

   c. The baker's percent of yeast used (initial yeast and any spike yeast);

   d. The fermentation time (total time and any spiking time);

   e. The amount of product baked;

f. A log of operating time for the catalytic oxidizer, monitoring equipment, and the associated ovens or product;

g. A maintenance log for the ovens, catalytic oxidizer, and monitoring equipment detailing all routine and non-routine maintenance performed including dates and duration of any outages;

h. The inlet and outlet temperature of the catalytic oxidizer and the temperature rise across the catalyst bed;

i. The pressure drop across the catalyst bed;

j. All periods where the temperature increase across the catalyst bed is less than 80% of the temperature increase recorded during the most recent performance test that demonstrated that the facility was in compliance and all periods where the inlet temperature of the catalytic oxidizer is less than 575ºF.

2. The owner/operator shall, on a monthly basis, determine and record the emission factor for each product baked using the following equation:

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

where:

VOC E.F. = pounds of VOC per ton of baked bread (emission factor)

Y_i = initial baker's percent of yeast

t_i = total yeast action time in hours

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

t_s = spiking time in hours

3. The owner/operator shall, on a monthly basis, determine and record the VOC emissions from each baking oven using the emission factors determined in Condition E.2.

4. The owner/operator shall, on a monthly basis, no later than 10 days after the first of the month, determine the total quantity of VOC discharged to the atmosphere from all operations for the entire facility. Monthly and 12-month rolling averages shall be calculated. The owner/operator shall keep records of this determination and provide such records to the Office of Air Resources upon request.

5. The owner/operator shall notify the Office of Air Resources in writing, within 15 days of the determination, whenever the total quantity of VOCs discharged to the atmosphere from all operations, for the entire facility exceeds 1825 pounds per calendar month, based upon a 12-month rolling average.

6. The owner/operator shall record the inspection results for the catalytic oxidizer and monitoring equipment.

7. The owner/operator shall record the results of the negative pressure determination in Condition C.5.

8. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information:

    a. The name and location of the facility;

    b. The subject source(s) that caused the noncompliance with the permit term;

    c. The time and date of first observation of the incident of noncompliance;

    d. The cause and expected duration of the incident of noncompliance;

    e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate.

    f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.

9. The owner/operator shall notify the Office of Air Resources of any record showing noncompliance with the terms of this permit or any other air pollution control rule or regulation applicable to the catalytic oxidizer and the baking ovens by sending a copy of the record to the Office of Air Resources within 30 days following the occurrence.

10. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.

11. The owner/operator shall notify the Office of Air Resources in writing of the date of actual start-up of the CSM LoTemp TORVEX^{TM} catalytic oxidizer, no later than 15 days after such date.

12. The owner/operator shall maintain a record of all measurements, performance evaluations, calibration checks and maintenance or adjustments for each continuous monitor.

13. The owner/operator shall notify the Office of Air Resources in writing, of any planned physical or operational change to any equipment that would:

    a. Change the representation of the facility in the permit application

    b. Alter the applicability of any state or federal air pollution rules or regulations

    c. Result in the violation of any terms or conditions of the permit

    d. Qualify as a modification under APC Regulation No. 9.

    Such notification shall include:

    - Information describing the nature of the change.
    - Information describing the effect of the change on the emission of any air contaminant.
    - The scheduled completion date of the planned change.

    Any change that may result in an increased emission rate of any air contaminant shall have the prior approval of the Director.

14. All records required in this permit shall be maintained for a minimum of 5 years after the date of each record and shall be available to representatives of the Office of Air Resources upon request.

F. Other Permit Conditions

1. To the extent consistent with the requirements of this permit and applicable federal and state laws, the equipment shall be designed, constructed and operated in accordance with the representation of the equipment in the permit application dated March 2010.

2. The owner/operator shall shut down the baking ovens in the event of a malfunction of the emission capture system and/or catalytic oxidizer that results in or that could result in, emissions in excess of the permit limits. The baking equipment shall remain shut down until the malfunction has been identified and corrected.

3. After completion of startup of the catalytic oxidizer, there shall be no by passing of the catalytic oxidizer during times when VOC is being discharged to the control device.

4. The owner/operator shall, on an annual basis, conduct testing, using the equipment manufacturer's recommended procedures, to determine if the catalyst bed in the control device requires replacement. Testing to evaluate the catalyst bed shall not be considered compliance testing. A copy of the results of this testing shall be submitted to the Office of Air Resources within 30 days of completion of the testing. Any catalyst bed determined to be in need of replacement shall be replaced as expeditiously as practicable.

5. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.

6. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the facility in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.

7. The issuance of this minor source permit does not limit or otherwise preclude the RI DEM from pursuing any enforcement action as provided by law and/or regulation against the owner/operator.

G. Malfunctions

1. Malfunction means a sudden and unavoidable breakdown of process or control equipment. In the case of a malfunction of any air pollution control system, all reasonable measures shall be taken to assure resumption of the designed control efficiency as soon as possible. In the event that the malfunction of an air pollution control system is expected or may reasonably be expected to continue for longer than 24 hours and if the owner or operator wishes to operate the source on which it is installed at any time beyond that period, the Director shall be petitioned for a variance under Section 23-23-15 of the General Laws of Rhode Island, as amended. Such petition shall include, but is not limited to, the following:

   a. Identification of the specific air pollution control system and source on which it is installed;

b. The expected period of time that the air pollution control system will be malfunctioning or out of service;

c. The nature and quantity of air contaminants likely to be emitted during said period;

d. Measures that will be taken to minimize the length of said period;

e. The reasons that it would be impossible or impractical to cease the source operation during said period.

2. The owner/operator may seek to establish that a malfunction of any air pollution control system that would result in noncompliance with any of the terms of this permit or any other applicable air pollution control rules and regulations was due to unavoidable increases in emissions attributable to the malfunction. To do so, the owner/operator must demonstrate to the Office of Air Resources that:

a. The malfunction was not attributable to improperly designed air pollution control equipment, lack of preventative maintenance, careless or improper operation, or operator error;

b. The malfunction was not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

c. Repairs were performed in an expeditious fashion. Off-shift labor and overtime should be utilized, to the extent practicable, to ensure that such repairs were completed as expeditiously as practicable.

d. All possible steps were taken to minimize emissions during the period of time that the repairs were performed.

e. Emissions during the period of time that the repairs were performed will not:

(1) Cause an increase in the ground level ambient concentration at or beyond the property line in excess of that allowed by Air Pollution Control Regulation No. 22 and any Calculated Acceptable Ambient Levels; and

(2) Cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard.

f. The reasons that it would be impossible or impractical to cease the source operation during said period.

g. The owner/operator's action in response to the excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence.

This demonstration must be provided to the Office of Air Resources, in writing, within two working days of the time when the malfunction occurred and contain a description of the malfunction, any steps taken to minimize emissions and corrective actions taken.

The owner/operator shall have the burden of proof in seeking to establish that noncompliance was due to unavoidable increases in emissions attributable to the malfunction.

H. Acetaldehyde Requirements

1. If the quantity of acetaldehyde emitted during a calendar year exceeds the Minimum Quantity for that substance specified in Table III of Air Pollution Control Regulation No. 22, the owner/operator shall register in writing with the Department on or before 15 April of the following calendar year. The registration shall be signed by the owner/operator.

2. An annual emissions summary submitted to comply with sections 14.2 or 14.3 of Rhode Island Air Pollution Control Regulation No. 14 shall satisfy the registration requirement provided that it includes all of the following information:.

   a. The name and address of the facility;

   b. The name and telephone number of the owner or operator of the facility and of a technical contact person for the facility; and

   c. For each of the listed toxic air contaminants emitted by the facility in an amount greater than the Minimum Quantity for that substance during the previous calendar year:

      (1) The name of the substance;

      (2) The process that emitted the substance;

      (3) The amount of the substance emitted by the facility during the previous calendar year, and

      (4) The method used to calculate emissions from the facility.