INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: May 13, 2008

RE: Harlan Bakeries, Inc. / 063-24103-00059

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot12/03/07

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New Source Construction and Minor Source Operating Permit
OFFICE OF AIR QUALITY

Harlan Bakeries, Inc.
7597 E. US Hwy 36
Avon, Indiana 46123

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M063-24103-00059	
Issued by/Original Signed By: Donald Robin, Section Chief Permits Branch Office of Air Quality	Issuance Date: May 13, 2008 Expiration Date: May 13, 2013

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary bagel bakery.

Source Address:	7597 E. US Hwy 36, Avon, Indiana 46123
Mailing Address:	7597 E. US Hwy 36, Avon, Indiana 46123
General Source Phone Number:	317-272-3600
SIC Code:	2051
County Location:	Hendricks
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

(a) One (1) natural gas-fired bagel bake oven, identified as BL1 (formerly identified as 01-BL1A), constructed in 1992, with a maximum heat input capacity of 2.00 MMBtu per hour, and a maximum throughput capapcity of 2.08 tons of dough per hour.

(b) One (1) natural gas-fired bagel bake oven, identified as BL4 (formerly identified as 02-BL1B), constructed prior to 2000, with a maximum heat input capacity of 12.928 MMBtu per hour, and a maximum throughput capacity of 4.15 tons of dough per hour.

(c) One (1) natural gas-fired bagel bake oven, identified as BL2, constructed in 1999, with a maximum heat input capacity of 9.00 MMBtu per hour, and a maximum throughput capacity of 2.68 tons of dough per hour, with emissions controlled by a catalytic oxidizer, identified as CO-1, which exhausts at stack S-1.

(d) One (1) natural gas-fired bagel bake oven, identified as BL3, constructed prior to 2000, with a maximum heat input capacity of 1.65 MMBtu per hour, and a maximum throughput capacity of 1.24 tons of dough per hour.

(e) One (1) diesel-fired 4-stroke lean-burn emergency generator constructed in 2002, identified as unit 25, with an output of 2,233 horsepower.

(f) Six (6) flour silos constructed in 1995, identified as units 14 (silo 1) through 19 (silo 6), with a total maximum throughput capacity of 67,900 tons of flour per year. Particulate emissions from units 14 through 16 (silos 1, 2, and 3) are controlled by baghouse D-0001. Particulate emissions from units 17 through 19 (silos 4, 5, and 6) are controlled by baghouse D0007.

(g) One (1) flour silo constructed in 1995, identified as unit 20 (silo FDL), with a maximum

throughput capacity of 25,000 tons of flour per year. Particulate emissions from unit 20 (silo FDL) are controlled by baghouse SPL Day Bin.

(h) One (1) flour silo constructed in 2000, identified as unit 21 (silo 7), with a maximum throughput capacity of 25,000 tons of flour per year. Particulate emissions from unit 21 (silo 7) are controlled by baghouse D0007.

(i) One (1) flour silo constructed in 2005, identified as unit 22 (silo 8), with a maximum throughput capacity of 25,000 tons of flour per year. Particulate emissions from unit 22 (silo 8) are controlled by baghouse D0008.

(j) Natural gas-fired bagel bake ovens used for quality assurance (QA) and research and development (R&D), with a total maximum throughput capacity of 0.01 tons of dough per hour, as follows:

(1) One (1) natural gas-fired R&D bagel bake oven constructed prior to 2000, indentified as unit 05-R&D, with a maximum heat input capacity of 0.385 MMBtu per hour.

(2) Two (2) natural gas-fired QA bagel bake ovens constructed prior to 2000, identified as units 06-QA1 and 07-QA2, with maximum heat input capacities of 0.20 MMBtu per hour and 0.1706 MMBtu per hour, respectively.

(3) One (1) natural gas-fired QA bagel bake oven constructed in 2003, indentified as unit 08-QA3, with a maximum heat input capacity of 0.18 MMBtu per hour.

(k) Two (2) natural gas-fired pressure washers constructed prior to 2000, identified as units 09-HOTSY and 10-LANDA, with maximum heat input capacities of 0.35 and 0.75 MMBtu per hour, respectively.

(l) Three (3) natural gas-fired bagel kettles constructed prior to 2000, identified as units BL1 Kettle, BL4 Kettle, and 13-FDL1, with maximum heat input capacities of 2.10 MMBtu per hour, 2.10 MMBtu per hour, and 2.00 MMBtu per hour, respectively.

(m) One (1) natural gas-fired bagel kettle constructed in 2006, identified as unit 23-FDL2, with a maximum heat input capacity of 2.10 MMBtu per hour.

(n) One (1) natural gas-fired dryer constructed in 2006, identified as unit 24-Dryer1, with a maximum heat input capacity of 1.40 MMBtu per hour.

(o) Thirty (30) natural gas-fired space heaters constructed from 1992 through 2003, identified as units 35 through 64, with a total maximum heat input capacity of 3.00 MMBtu per hour.

(p) Three (3) natural gas-fired boilers constructed after 1983, identified as units 66-B1, 67-B2, and 68-B3, with maximum heat input capacities of 3.36 MMBtu per hour, 3.36 MMBtu per hour, and 8.40 MMBtu per hour, respectively.

(q) One (1) natural gas-fired pan washer, approved for construction in 2008, with a maximum heat input capacity of 0.685 MMBtu per hour.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M063-24103-00059, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

(c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.10 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M063-24103-00059 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.13 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.15 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.16 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.

(b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.19 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Response to Excursions or Exceedances

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.17 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) One (1) natural gas-fired bagel bake oven, identified as BL2, constructed in 1999, with a maximum heat input capacity of 9.00 MMBtu per hour, and a maximum throughput capacity of 2.68 tons of dough per hour, with emissions controlled by a catalytic oxidizer, identified as CO-1, which exhausts at stack S-1.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

(a) Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), the Permittee shall control VOC emissions from oven BL2 using the Best Available Control Technology (BACT), which has been determined to be the following:

(1) The VOC emissions from the bagel oven (BL2) shall be controlled by a catalytic oxidizer (CO-1). The catalytic oxidizer shall be installed and begin operation no later than six (6) months after the issuance of this permit, MSOP 063-24103-00059.

(2) The overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv.

(3) The VOC emissions from the catalytic oxidizer CO-1 stack exhaust (S-1) shall not exceed 0.36 pounds per hour.

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for oven BL2 and the catalytic oxidizer.

Compliance Determination Requirements

D.1.3 VOC Control

In order to comply with Condition D.1.1, the catalytic oxidizer shall be in operation and control emissions from oven BL2 at all times that oven BL2 is in operation.

D.1.4 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11 [326 IAC 2-2]

In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform VOC testing (including emission rate and overall control efficiency of the catalytic oxidizer) for the catalytic oxidizer within 180 days after installation, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.5 Catalytic Oxidizer Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the catalytic oxidizer for measuring operating temperature. The output of this system shall be recorded continuously. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above a temperature of 600°F.

(b) The Permittee shall determine the average temperature from the most recent valid stack test that demonstrates compliance Condition D.1.1, as approved by IDEM.

(c) On and after the date the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the average temperature as observed during the compliant stack test.

D.1.6 Parametric Monitoring

(a) The Permittee shall determine the appropriate duct pressure or fan amperage of the capture system for the catalytic oxidizer from the most recent valid stack test that demonstrates compliance with Condition D.1.1, as approved by IDEM.

(b) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation. On and after the date the approved stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.7 Record Keeping Requirements

(a) Upon startup of the catalytic oxidizer and to document compliance with Condition D.1.5, the Permittee shall maintain continuous temperature records for the catalytic oxidizer and the average temperature used to demonstrate compliance during the most recent compliant stack test.

(b) Upon startup of the catalytic oxidizer and to document compliance with Condition D.1.6, the Permittee shall maintain daily records of the duct pressure or fan amperage for the catalytic oxidizer. The Permittee shall include in its daily record when a duct pressure or a fan amperage reading is not taken and the reason for the lack of a duct pressure or fan amperage reading (e.g. the process did not operate that day).

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(p) Three (3) natural gas-fired boilers constructed after 1983, identified as units 66-B1, 67-B2, and 68-B3, with maximum heat input capacities of 3.36 MMBtu per hour, 3.36 MMBtu per hour, and 8.40 MMBtu per hour, respectively.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.2.1 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the natural gas-fired boilers identified as 66-B1, 67-B2, and 68-B3 shall be limited to 0.54 pounds per MMBtu heat input.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Harlan Bakeries, Inc.
Address:	7597 E. US Hwy 36
City:	Avon, Indiana 46123
Phone #:	317-272-3600
MSOP #:	M063-24103-00059

I hereby certify that Harlan Bakeries, Inc. is :
- ☐ still in operation.
- ☐ no longer in operation.

I hereby certify that Harlan Bakeries, Inc. is :
- ☐ in compliance with the requirements of MSOP M063-24103-00059.
- ☐ not in compliance with the requirements of MSOP M063-24103-00059.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit (MSOP)

Source Background and Description

Source Name:	Harlan Bakeries, Inc.
Source Location:	7597 E. US Hwy 36, Avon, Indiana 46123
County:	Hendricks
SIC Code:	2051
Operation Permit No.:	M063-24103-00059
Permit Reviewer:	ERG/SE

The Office of Air Quality (OAQ) has reviewed a New Source Construction and MSOP application from Harlan Bakeries, Inc. relating to the operation of a bagel bakery.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

(a) One (1) natural gas-fired bagel bake oven, identified as BL1 (formerly identified as 01-BL1A), constructed in 1992, with a maximum heat input capacity of 2.00 MMBtu per hour, and a maximum throughput capapcity of 2.08 tons of dough per hour.

(b) One (1) natural gas-fired bagel bake oven, identified as BL4 (formerly identified as 02-BL1B), constructed prior to 2000, with a maximum heat input capacity of 12.928 MMBtu per hour, and a maximum throughput capacity of 4.15 tons of dough per hour.

(c) One (1) natural gas-fired bagel bake oven, identified as BL2, constructed in 1999, with a maximum heat input capacity of 9.00 MMBtu per hour, and a maximum throughput capacity of 2.68 tons of dough per hour, with emissions controlled by a catalytic oxidizer, identified as CO-1, which exhausts at stack S-1.

(d) One (1) natural gas-fired bagel bake oven, identified as BL3, constructed prior to 2000, with a maximum heat input capacity of 1.65 MMBtu per hour, and a maximum throughput capacity of 1.24 tons of dough per hour.

(e) One (1) diesel-fired 4-stroke lean-burn emergency generator constructed in 2002, identified as unit 25, with an output of 2,233 horsepower.

(f) Six (6) flour silos constructed in 1995, identified as units 14 (silo 1) through 19 (silo 6), with a total maximum throughput capacity of 67,900 tons of flour per year. Particulate emissions from units 14 through 16 (silos 1, 2, and 3) are controlled by baghouse D-0001. Particulate emissions from units 17 through 19 (silos 4, 5, and 6) are controlled by baghouse D0007.

(g) One (1) flour silo constructed in 1995, identified as unit 20 (silo FDL), with a maximum throughput capacity of 25,000 tons of flour per year. Particulate emissions from unit 20 (silo FDL) are controlled by baghouse SPL Day Bin.

(h) One (1) flour silo constructed in 2000, identified as unit 21 (silo 7), with a maximum throughput capacity of 25,000 tons of flour per year. Particulate emissions from unit 21 (silo 7) are controlled by baghouse D0007.

(i) One (1) flour silo constructed in 2005, identified as unit 22 (silo 8), with a maximum throughput capacity of 25,000 tons of flour per year. Particulate emissions from unit 22 (silo 8) are controlled by baghouse D0008.

(j) Natural gas-fired bagel bake ovens used for quality assurance (QA) and research and development (R&D), with a total maximum throughput capacity of 0.01 tons of dough per hour, as follows:

(1) One (1) natural gas-fired R&D bagel bake oven constructed prior to 2000, indentified as unit 05-R&D, with a maximum heat input capacity of 0.385 MMBtu per hour.

(2) Two (2) natural gas-fired QA bagel bake ovens constructed prior to 2000, identified as units 06-QA1 and 07-QA2, with maximum heat input capacities of 0.20 MMBtu per hour and 0.1706 MMBtu per hour, respectively.

(3) One (1) natural gas-fired QA bagel bake oven constructed in 2003, indentified as unit 08-QA3, with a maximum heat input capacity of 0.18 MMBtu per hour.

(k) Two (2) natural gas-fired pressure washers constructed prior to 2000, identified as units 09-HOTSY and 10-LANDA, with maximum heat input capacities of 0.35 and 0.75 MMBtu per hour, respectively.

(l) Three (3) natural gas-fired bagel kettles constructed prior to 2000, identified as units BL1 Kettle, BL4 Kettle, and 13-FDL1, with maximum heat input capacities of 2.10 MMBtu per hour, 2.10 MMBtu per hour, and 2.00 MMBtu per hour, respectively.

(m) One (1) natural gas-fired bagel kettle constructed in 2006, identified as unit 23-FDL2, with a maximum heat input capacity of 2.10 MMBtu per hour.

(n) One (1) natural gas-fired dryer constructed in 2006, identified as unit 24-Dryer1, with a maximum heat input capacity of 1.40 MMBtu per hour.

(o) Thirty (30) natural gas-fired space heaters constructed from 1992 through 2003, identified as units 35 through 64, with a total maximum heat input capacity of 3.00 MMBtu per hour.

(p) Three (3) natural gas-fired boilers constructed after 1983, identified as units 66-B1, 67-B2, and 68-B3, with maximum heat input capacities of 3.36 MMBtu per hour, 3.36 MMBtu per hour, and 8.40 MMBtu per hour, respectively.

(q) One (1) natural gas-fired pan washer, approved for construction in 2008, with a maximum heat input capacity of 0.685 MMBtu per hour.

Existing Approvals

This is the first air approval issued to this source.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the baghouses be considered as an integral part of the flour silo/pneumatic conveyance process.

The pneumatic flour conveying system used at the Harlan Bakery facility moves this basic raw material from the delivery vehicles (rail and truck) to the six (6) storage silos and from these silos to the various day-silos serving the dough lines at the plant. Compressed air is used to fluidize the flour and convey it through piping to the silos. Since the air stream used for the conveying system is heavily laden with flour (estimated to be from 1 to 2 percent), if an efficient air/solids separator were not installed, the flour would be released to the ambient air. Since the plant uses approximately 45,000 tons of flour per year and moves this raw material at least twice, it would likely release from 900 to 1800 tons of flour to the environment. The financial loss would be from $200 to $250 per ton or well over $200,000 per year. The cost of each baghouse is approximately $30,000 with an annual operating cost of less than $1,000 for an annualized cost of approximately $4,000 to $5,000. The total annual cost for all pneumatic air separation units (baghouses) is therefore approximately $25,000.

IDEM, OAQ has evaluated the justifications and agreed that the baghouses will be considered as an integral part of the flour silo/pneumatic conveyance process. Therefore, the permitting level will be determined using the potential to emit after the baghouses. Operating conditions in the proposed permit will specify that the baghouses shall operate at all times when the flour silo/pneumatic conveyance system is in operation.

Enforcement Issue

(a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled “Unpermitted Emission Units and Pollution Control Equipment”.

(b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction and operating permit rules.

Recommendation

The staff recommends to the Commissioner that the New Source Construction and MSOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete application for the purposes of this review was received on December 20, 2006. Additional information was received on September 14, 2007, October 2, 2007, and November 5, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 6).

Potential to Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, inclulding air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential to Emit (tons/yr)
PM	2.06
PM-10	3.44
SO_2	2.40
VOC	73.0
CO	23.3
NO_x	37.5

HAPs	Potential to Emit (tons/yr)
Total HAPs	0.46

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of all pollutants is less than 100 tons per year. The potential to emit VOC and NOx is greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. A MSOP will be issued.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-1.1-1(16)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7. A MSOP will be issued.

(c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this MSOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit (tons/year)						
Process/emission unit	PM	PM-10	SO_2	VOC	CO	NO_x	HAPs
Natural Gas Combustion	0.45	1.81	0.14	1.31	20.0	23.8	0.45
Bagel Ovens[(1)]	--	--	--	41.2	--	--	--
Flour Silos	1.21	1.21	--	--	--	--	--
Emergency Generator	0.39	0.39	2.26	0.39	3.07	13.4	Negligible
Pan Washer	0.01	0.02	1.76E-03	0.02	0.25	0.29	0.01
Total Emissions	2.06	3.41	2.40	42.9	23.1	37.2	0.45

[(1)]The VOC emissions from oven BL2 are limited pursuant to 326 IAC 8-1-6.

County Attainment Status

The source is located in Hendricks County.

Pollutant	Status
PM-10	Attainment
PM2.5	Nonattainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

Note 1: On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

Note 2: On November 8, 2007 the Indiana Air Pollution Control Board finalized a temporary emergency rule to redesignate Hendricks County as attainment for the 8-hour ozone standard.

(a) U.S. EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Hendricks County as nonattainment for PM2.5. On March 7, 2005, the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as surrogate for PM2.5 emissions pursuant to the Non-attainment New Source Review requirements. See the State Rule Applicability - Entire Source section.

(b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone.

On November 8, 2007, a temporary emergency rule took effect redesignating Hendricks County to attainment for the eight-hour ozone standard. The Indiana Air Pollution Control Board has begun the process for a permanent rule revision to incorporate these changes into 326 IAC 1-4-1. The permanent revision to 326 IAC 1-4-1 should take effect prior to the expiration of the emergency rule. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.

(c) Hendricks County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability - Entire Source section.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	2.06
PM10	3.44
SO_2	2.40
VOC	73.0
CO	23.3
NOx	37.5
Total HAPs	0.46

(a) This existing source is not a major stationary source under PSD because no regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.

(b) This existing source is not a major stationary source under Emission Offset because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit for this source.

(b) The boilers are not subject to the requirements of the New Source Performance Standard for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971, 326 IAC 12 (40 CFR 60, Subpart D) because the boilers each have a maximum heat input capacity less than 250 million Btu per hour.

(c) The boilers are not subject to the requirements of the New Source Performance Standard for Industrial-Commercial-Institutional Steam Generating Units, 326 IAC 12 (40 CFR 60, Subpart Db) because the boilers each have a maximum heat input capacity less than 100 million Btu per hour.

(d) The boilers are not subject to the requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 326 IAC 12 (40 CFR 60, Subpart Dc) because the boilers each have a maximum heat input capacity less than 10 million Btu per hour.

(e) The emergency generator is not subject to the requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 326 IAC 12 (40 CFR 60, Subpart IIII) because it was constructed in 2002 and has not been modified or reconstructed.

(f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit for this source.

(g) The emergency generator is subject to the requirements of 40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines) as revised on January 18, 2008 because it is an existing stationary reciprocating internal combustion engine (RICE) located at an area source of HAPs.

However, pursuant to 40 CFR 63, Subpart 63.6590, this existing RICE at an area source does not have to meet the requirements of 40 CFR 63, Subparts A and ZZZZ and no initial notification is necessary. Therefore, the requirements of 40 CFR 63, Subpart ZZZZ have not been included in this permit for this source.

Pursuant to 40 CFR 63.6585(d), an area source subject to this subpart is not subject to the obligation to obtain a Part 70 permit, unless that source is required to obtain a Part 70 permit for another reason. Therefore, this source is still eligible to operate under the MSOP program.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is not in one of 28 source categories, was initially constructed in 1992, and was modified between 1995 and 2000, and in 2000, 2002, 2003, 2005, and 2006. At the time of initial construction, this source did not have the potential to emit 250 tons or more per year of any regulated pollutant. After each modification, the source-wide potential to emit of all regulated pollutants remained less than 250 tons per year. Therefore, this source is not a major stationary source and the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-3 (Emission Offset)

This source was initially constructed in Hendricks County in 1992, and was modified several times between 1995 and 2006. Hendricks County was designated as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM2.5 Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM 2.5 major NSR regulations, states should assume that a major stationary source's PM10 emissions represent PM2.5 emissions. IDEM will use the PM10 nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM2.5 NAAQS. This source was modified in 2005 and 2006 after Hendricks County was designated nonattainment for PM2.5; however, none of the modifcations after January 5, 2005 resulted in a significant increase in emissions of PM10. Therefore, assuming that PM10 emissions represent PM2.5 emissions, 326 IAC 2-3 does not apply. Hendricks County was designated as non-attainment for the 8-hour Ozone standard in 69 FR 23858 dated April 30, 2004. This source was modified after Hendricks County was designated nonattainment for the 8-hour Ozone standard; however, none of the modifications resulted in a significant increase in emissions of VOC or NOx. On November 8, 2007, a temporary emergency rule took effect redesignating Hendricks County to attainment for the eight-hour ozone standard. Therefore, this source is not subject to the requirements of 326 IAC 2-3.

326 IAC 2-6 (Emission Reporting)

This source is located in Hendricks County, is not required to operate under a Part 70 permit, and has potential lead emissions less than five (5) tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6-5 (Fugitive Particulate Matter Emissions)

This source is not a source of fugitive particulate matter emissions. Therefore, the requirements of 326 IAC 6-5 are not applicable.

State Rule Applicability – Bagel Bake Ovens

326 IAC 8-1-6 (General Reduction Requirements for New Facilities)

(a) The bagel bake oven identified as BL2 was constructed in 1999 in Hendricks County and has potential VOC emissions greater than twenty-five (25) tons per year. The applicant does not wish to take a limit to avoid the requirements of 326 IAC 8-1-6; therefore, oven BL2 is subject to 326 IAC 8-1-6 and the Permittee is required to control VOC emissions from this bagel oven using the Best Available Control Technology (BACT). According to the BACT analysis contained in Appendix B, IDEM, OAQ has determined that the following requirements represent BACT for bagel oven BL2:

(1) The VOC emissions from the bagel oven (BL2) shall be controlled by a catalytic oxidizer (CO-1). The catalytic oxidizer shall be installed and begin operation no later than six (6) months after the issuance of MSOP 063-24103-00059.

(2) The overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv.

(3) The VOC emissions from the catalytic oxidizer (CO-1) stack exhaust (S-1) shall not exceed 0.36 pounds per hour.

The above emission limit was calculated as follows:

VOC Limit (lbs/hr) = PTE (tons/yr)*(1 - control efficiency)*
(2,000 lbs/ton)*(1 yr/8,760 hrs)

VOC Limit (lbs/hr) = (31.7 tons/yr)*(1 - 0.95)*(2,000 lbs/ton)*(1 yr/8,760 hrs) = 0.36 lbs/hr

(b) The requirements of 326 IAC 8-1-6 are not applicable to the other bagel bake ovens at this source (04-BL3, 034-BL4, 05-R&D, 06-QA1, 07-QA2, and 08-QA3) since they each do not have the potential to emit twenty-five (25) tons or more of VOC per year.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The bagel bake ovens are not a source of indirect heating; therefore, the bagel bake ovens are not subject to the requirements of 326 IAC 6-2.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The bagel bake ovens each have particulate emissions that are less than five hundred fifty-one thousandths (0.551) pound per hour. Pursuant to 326 IAC 6-3-1(b)(14), the bagel bake ovens are exempt from the requirements of 326 IAC 6-3.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The bagel bake ovens are not subject to the requirements of 326 IAC 7-1.1, because they do not have the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

State Rule Applicability – Flour Silos and Pneumatic Conveyance System

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The flour silos and pneumatic conveyance system has particulate emissions that are less than five hundred fifty-one thousandths (0.551) pound per hour. Pursuant to 326 IAC 6-3-1(b)(14), the flour silos and pneumatic conveyance system are exempt from the requirements of 326 IAC 6-3.

State Rule Applicability - Natural Gas-fired Boilers, Dryer, Kettles, Space Heaters, and Pressure Washers

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

(a) The dryer, kettles, space heaters and pressure washers are not sources of indirect heating; therefore, these units are not subject to the requirements of 326 IAC 6-2.

(b) The natural gas-fired boilers identified as 66-B1, 67-B2, and 68-B3 are sources of indirect heating that were constructed after September 21, 1983 in Hendricks County. Pursuant to 326 IAC 6-2-1(d), particulate emissions from the boilers shall be limited by section 4 of this rule. Pursuant to 326 IAC 6-2-4(a), particulate emissions from the boilers should be calculated using the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
Q = total source operating capacity (3 boilers with a total heat input of 15.1 MMBtu/hour)

$$P_t = \frac{1.09}{(15.1)^{0.26}} = 0.54 \text{ lbs/MMBtu}$$

Therefore, the boilers shall comply with a PM limit of 0.54 lb per MMBtu heat input. Based on a heating value of 1,020 million Btu per million standard cubic feet (MMscf) of natural gas and the AP-42 emission factor for natural gas combustion in the boilers, the boilers are able to comply with this limit.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The natural gas-fired dryer, kettles, space heaters, and pressure washers each have particulate emissions that are less than five hundred fifty-one thousandths (0.551) pound per hour, and the boilers are sources of indirect heating. Pursuant to 326 IAC 6-3-1(b)(1) and 326 IAC 6-3-1(b)(14), the natural gas-fired emission units at this source are exempt from the requirements of 326 IAC 6-3.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The natural gas-fired boilers, dryer, kettles, space heaters, and pressure washers are not subject to the requirements of 326 IAC 7-1.1, because they do not have the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

326 IAC 8-1-6 (General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable to the natural gas-fired boilers, dryer, kettles, space heaters, and pressure washers since they each do not have the potential to emit twenty-five (25) tons or more of VOC per year.

State Rule Applicability - Emergency Generator

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The emergency generator is not a source of indirect heating; therefore, the emergency generator is not subject to the requirements of 326 IAC 6-2.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The emergency generator has particulate emissions that are less than five hundred fifty-one thousandths (0.551) pound per hour. Pursuant to 326 IAC 6-3-1(b)(14), the emergency generator is exempt from the requirements of 326 IAC 6-3.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The emergency generator is not subject to the requirements of 326 IAC 7-1.1, because it does not have the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

326 IAC 8-1-6 (General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable to the emergency generator, because it does not have the potential to emit twenty-five (25) tons or more of VOC per year.

326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))

The generator is not subject to the requirements of 326 IAC 10-5, because it is not a large NOx SIP Call engine.

State Rule Applicability - Natural Gas-fired Pan Washer

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

The natural gas-fired pan washer is not a source of indirect heating; therefore, it is not subject to the requirements of 326 IAC 6-2.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The natural gas-fired pan washer does not have the potential to emit five hundred fifty-one thousandths (0.551) pound per hour or more of particulate emissions. Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired pan washer is exempt from the requirements of 326 IAC 6-3.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The natural gas-fired pan washer is not subject to the requirements of 326 IAC 7-1.1, because it does not have the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide.

326 IAC 8-1-6 (General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable to the natural gas-fired pan washer because it does not have the potential to emit twenty-five (25) tons or more of VOC per year.

326 IAC 8-3 (Organic Solvent Degreasing Operations) and 326 IAC 8-6 (Organic Solvent Emission Limitations)

The pan washer does not use any detergents or organic solvents. Therefore, it is not subject to the requirements of 326 IAC 8-3 or 8-6.

Compliance Determination and Monitoring Requirements

The testing requirements applicable to this source are as follows:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Bagel Oven BL2	Catalytic Oxidizer	180 days after installation of catalytic oxidizer	VOC	Once every 5 years	0.36 lbs/hr; 95% overall control efficiency or VOC outlet concentration shall not exceed 10ppmv

The bagel oven BL2 is controlled by a catalytic oxidizer. The VOC emissions from oven BL2 are limited to 0.36 pounds per hour pursuant to 326 IAC 8-1-6. These testing requirements are necessary because the catalytic oxidizer must operate properly in order to ensure compliance with 326 IAC 8-1-6.

Conclusion

The operation of this bagel bakery shall be subject to the conditions of the attached MSOP 063-24103-00059.

Appendix A: Emission Calculations
Emissions From Natural Gas Combustion

Company Name: Harlan Bakeries, Inc.
Address: 7597 E. US Highway 36, Avon, Indiana 46123
MSOP: 063-24103-00059
Reviewer: ERG/SE
Date: March 27, 2008

	Pollutant						
	PM*	PM10*	SO_2	NOx **	VOC	CO	HAPs
Emission Factor (lbs/MMscf)	1.9	7.6	0.6	100	5.5	84.0	1.89

			Potential to Emit (tons/yr)						
Emission Unit	**Maximum Heat Input Capacity (MMBtu/hr)**	**Potential Throughput (MMscf/yr)**	PM	PM10	SO_2	NOx	VOC	CO	HAPs
BL1 (formerly BL1A) (Bagel Oven)	2.00	17.2	0.02	0.07	0.01	0.86	0.05	0.72	0.02
BL4 (formerly BL1B) (Bagel Oven)	12.9	111	0.11	0.42	0.03	5.55	0.31	4.66	0.10
BL2 (Bagel Oven)	9.00	77.3	0.07	0.29	0.02	3.86	0.21	3.25	0.07
BL3 (Bagel Oven)	1.65	14.2	0.01	0.05	4.25E-03	0.71	0.04	0.60	0.01
Boiler S-0001 B1	3.36	28.9	0.03	0.11	8.66E-03	1.44	0.08	1.21	0.03
Boiler S-0002 B2	3.36	28.9	0.03	0.11	8.66E-03	1.44	0.08	1.21	0.03
Boiler S-03 B3	8.40	72.1	0.07	0.27	2.16E-02	3.61	0.20	3.03	0.07
Oven 06-QA1	0.20	1.72	1.63E-03	0.01	5.15E-04	0.09	4.72E-03	0.07	1.62E-03
Oven 05-R&D	0.39	3.31	3.14E-03	0.01	9.92E-04	0.17	0.01	0.14	3.12E-03
Oven 07-QA2	0.17	1.47	1.39E-03	0.01	4.40E-04	0.07	4.03E-03	0.06	1.38E-03
Washer 009 HOTSY	0.35	3.01	2.86E-03	0.01	9.02E-04	0.15	0.01	0.13	2.84E-03
Washer 010 LANDA	0.75	6.44	0.01	0.02	1.93E-03	0.32	0.02	0.27	0.01
BL1 Kettle	2.10	18.0	0.02	0.07	5.41E-03	0.90	0.05	0.76	0.02
BL4 Kettle	2.10	18.0	0.02	0.07	5.41E-03	0.90	0.05	0.76	0.02
Kettle 013 FDL1	2.00	17.2	0.02	0.07	5.15E-03	0.86	0.05	0.72	0.02
Oven 08-QA3	0.18	1.55	0.00	0.01	4.64E-04	0.08	4.25E-03	0.06	1.46E-03
Kettle 023 FDL2	2.10	18.0	0.02	0.07	5.41E-03	0.90	0.05	0.76	0.02
Dryer 1-024	1.40	12.0	0.01	0.05	3.61E-03	0.60	0.03	0.50	0.01
Space Heaters (035 through 064) Total	3.00	25.8	0.02	0.10	7.73E-03	1.29	0.07	1.08	0.02
		Total	**0.45**	**1.81**	**0.14**	**23.8**	**1.31**	**20.0**	**0.45**

* PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM combined.
**Emission factor for NOx (Uncontrolled) = 100 lb/MMscf.
Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (7/98).
All Emission factors are based on normal firing.

Methodology
Potential Throughput (MMscf/yr) = Maximum Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMscf/1,020 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMscf/yr) x Emission Factor (lbs/MMscf) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
VOC Emissions From Bagel Ovens

Company Name: Harlan Bakeries, Inc.
Address: 7597 E. US Highway 36, Avon, Indiana 46123
MSOP: 063-24103-00059
Reviewer: ERG/SE
Date: March 27, 2008

1. Emission Factor

According to AP-42, Chapter 9.9.6 - Bread Baking (2/97), the VOC emission factor for yeast-raised bread baking point sources can be estimated using the following equation:

VOC Ef = 0.95Yi + 0.195ti - 0.51S - 0.86ts + 1.90

where:

VOC Ef = pounds VOC per ton of baked bread
Yi = initial baker's percent of yeast
ti = total yeast action time in hours
S = final (spike) baker's percent of yeast*
ts = spiking time in hours*

*According to "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992), for processes where no final yeast is added, S and ts may be removed from the equation.
This source does not add final yeast (sponge dough process); this source uses a straight dough process (all ingredients are mixed in one time). Therefore, the VOC emission factor equation used for this source should be:

VOC Ef = 0.95Yi + 0.195ti + 1.90

2. Potential to Emit VOC

Emission Unit	Maximum Throughput Capacity (tons dough baked/hr)	Yi**	ti**	AP-42 VOC Emission Factor (lbs VOC/ton dough)	VOC Emission Factor from Test (lbs VOC/ton dough)***	PTE VOC (tons/yr)	Limited VOC Emissions (tons/yr)****
BL1 (formerly BL1A)	2.08	1.32	1.50	3.45	0.13	1.18	1.18
BL4 (formerly BL1B)	4.15	1.32	1.50	3.45	1.03	18.7	18.7
BL2 (Bagel Oven)	2.68	1.38	1.50	3.50	2.70	31.7	1.58
BL3 (Bagel Oven)	1.24	1.58	1.00	3.60	ND	19.5	19.5
All R&D, QA	0.01	2.94	1.50	4.99	ND	0.22	0.22
					Total	**71.3**	**41.2**

ND = Not Determined

**Yi and ti are reported by the source.

***The source performed stack testing on BL1 (formerly BL1A), BL4 (formerly BL1B), and BL2 on May 1, 2007 and May 2, 2007. The tests were approved by IDEM. Therefore, the PTE VOC from BL1, BL4, and BL2 was calculated using the emission factors obtained during testing.
BL3 and the R&D and QA ovens were not tested; therefore, the PTE VOC from these ovens was calculated using the AP-42 emission factors.

****The VOC emissions from ovens BL1, BL4, BL3, and R&D, QA are not limited in the permit. The VOC emissions from oven BL2 are limited to 0.36 lbs/hr pursuant to 326 IAC 8-1-6.

Methodology
PTE VOC (tons/yr) = VOC Emission Factor (lbs VOC/ton dough) x Maximum Throughput Capacity (tons dough baked/hr) x 8,760 hrs/yr x 1 ton/2,000 lbs
Limited VOC Emissions (tons/yr) for BL1, BL4, BL3 and R&D, QA = PTE VOC (tons/yr)
Limited VOC Emissions (tons/yr) for BL2 = 0.36 lbs/hr x 8,760hrs/yr x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Particulate Emissions From Flour Silos

Company Name: Harlan Bakeries, Inc.
Address: 7597 E. US Highway 36, Avon, Indiana 46123
MSOP: 063-24103-00059
Reviewer: ERG/SE
Date: March 27, 2008

Emission Unit	Control Efficiency (%)	Maximum Throughput (tons/yr)	PM/PM10 Emission Factor (lb/ton)	Controlled PTE PM/PM10 (tons/yr)
Flour Silos 1 through 6 (14-19)	99.0%	67,900	0.017	0.58
Flour Silo FDL (20)	99.0%	25,000	0.017	0.21
Flour Silo 7 (21)	99.0%	25,000	0.017	0.21
Flour Silo 8 (22)	99.0%	25,000	0.017	0.21
			Total	**1.21**

Emission factor is from FIRE Version 6.25 for SCC 3-02-007-78 and is based on using a fabric filter as a control device.
No emission factor is found in AP-42 or FIRE for SCC 30203204.

The baghouses used in conjunction with the flour silos and pneumatic conveyance system are integral to this process. Therefore, the potential to emit after the control devices is used to determine permit level.

Methodology
Controlled PTE PM/PM10 (tons/yr) = Maximum Throughput (tons/yr) x PM/PM10 Emission Factor (lb/ton) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Diesel-fired Large Emergency Generator

Company Name: Harlan Bakeries, Inc.
Address: 7597 E. US Highway 36, Avon, Indiana 46123
MSOP: 063-24103-00059
Reviewer: ERG/SE
Date: March 27, 2008

Maximum Output Capacity	S = Weight % Sulfur
2,233 HP	0.5

	Pollutant					
	PM*	PM10*	SO2	NOx**	VOC***	CO
Emission Factor (lb/hp-hr)	7.00E-04	7.00E-04	4.05E-03 *(8.09E-3)(S)*	2.40E-02	7.05E-04	5.50E-03
Potential to Emit (tons/yr)	0.39	0.39	2.26	13.4	0.39	3.07

Emission Factors are from AP42, Chapter 3.4, Table 3.4-1 (SCC 2-02-004-01) [Supplement B, 10/96].
*Assume PM equals PM10
**Uncontrolled
***Emission factor is for TOC.

Methodology
Potential to Emit (tons/yr) = Maximum Output Capacity (hp) x Emission Factor (lb/hp-hr) x 500 hrs/yr x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Emissions From Natural Gas-fired Pan Washer

Company Name: Harlan Bakeries, Inc.
Address: 7597 E. US Highway 36, Avon, Indiana 46123
MSOP: 063-24103-00059
Reviewer: ERG/SE
Date: March 27, 2008

	Pollutant						
	PM*	PM10*	SO_2	NOx **	VOC	CO	HAPs
Emission Factor (lbs/MMscf)	1.9	7.6	0.6	100	5.5	84.0	1.89

			Potential to Emit (tons/yr)						
Emission Unit	**Maximum Heat Input Capacity (MMBtu/hr)**	**Potential Throughput (MMscf/yr)**	PM	PM10	SO_2	NOx	VOC	CO	HAPs
Pan Washer Douglas	0.685	5.88	0.01	0.02	1.76E-03	0.29	0.02	0.25	0.01
		Total	**0.01**	**0.02**	**1.76E-03**	**0.29**	**0.02**	**0.25**	**0.01**

* PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM combined.
**Emission factor for NOx (Uncontrolled) = 100 lb/MMscf.
Emission factors are from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (7/98).
All Emission factors are based on normal firing.

Methodology
Potential Throughput (MMscf/yr) = Maximum Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMscf/1,020 MMBtu
Potential to Emit (tons/yr) = Potential Throughput (MMscf/yr) x Emission Factor (lbs/MMscf) x 1 ton/2,000 lbs

Appendix A: Emission Calculations
Emission Summary

Company Name: Harlan Bakeries, Inc.
Address: 7597 E. US Highway 36, Avon, Indiana 46123
MSOP: 063-24103-00059
Reviewer: ERG/SE
Date: March 27, 2008

Unlimited Potential to Emit (tons/yr)

	PM	PM10	SO_2	NOx	VOC	CO	HAPs
Natural Gas Combustion	0.45	1.81	0.14	23.8	1.31	20.0	0.45
Bagel Ovens	--	--	--	--	71.3	--	--
Flour Silos	1.21	1.21	--	--	--	--	--
Generator	0.39	0.39	2.26	13.4	0.39	3.07	Negligible
Pan Washer	0.01	0.02	1.76E-03	0.29	0.02	0.25	0.01
Total	**2.06**	**3.44**	**2.40**	**37.5**	**73.0**	**23.3**	**0.46**

Limited Potential to Emit (tons/yr)

	PM	PM10	SO_2	NOx	VOC	CO	HAPs
Natural Gas Combustion	0.45	1.81	0.14	23.8	1.31	20.0	0.45
Bagel Ovens	--	--	--	--	41.2	--	--
Flour Silos	1.21	1.21	--	--	--	--	--
Generator	0.39	0.39	2.26	13.4	0.39	3.07	Negligible
Pan Washer	0.01	0.02	1.76E-03	0.29	0.02	0.25	0.01
Total	**2.06**	**3.44**	**2.40**	**37.5**	**42.9**	**23.3**	**0.46**

Appendix B
Best Available Control Technology (BACT) Determinations

Source Background and Description

Source Name:	Harlan Bakeries, Inc.
Source Location:	7597 E. US Hwy 36, Avon, Indiana 46123
County:	Hendricks
SIC Code:	2051
Operating Permit No.:	M063-24103-00059
Permit Reviewer:	ERG/SE

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following Best Available Control Technology (BACT) review for a New Source Construction and Minor Source Operating Permit (MSOP) for an existing bagel bakery, owned and operated by Harlan Bakeries, Inc. located at 7597 E. US Hwy 36, Avon, Indiana 46123.

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), BACT is required for all facilities constructed after January 1, 1980 that have potential VOC emissions of equal to or greater than twenty-five (25) tons per year and are not regulated by other rules in 326 IAC 8. Based on the calculations (see Appendix A) and the analysis of applicable state regulations (see State Rule Applicability section of TSD), the one (1) bagel oven identified as BL2 (constructed in 1999) is subject to the requirements of 326 IAC 8-1-6. The uncontrolled potential to emit VOC from this oven is 31.7 tons per year.

IDEM, OAQ conducts BACT analyses in accordance with the "Top-Down" Best Available Control Technology process, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below:

(a) Identify all potentially available control options;
(b) Eliminate technically infeasible control options;
(c) Rank remaining control technologies by control effectiveness;
(d) Evaluate the most effective controls and document the results as necessary; and
(e) Select BACT.

In accordance with EPA guidance, the BACT analysis should take into account the energy, environmental, and economic impacts. Emission reductions may be achieved through the application of available control techniques, changes in process design, and/or operational limitations. These BACT determinations are based on the following information:

(a) The BACT analysis information submitted by Harlan Bakeries, Inc. on October 2, 2007;

(b) Information from vendors/suppliers;

(c) The EPA RACT/BACT/LAER (RBLC) Clearinghouse; and

(d) State and local air quality rules and permits.

Introduction

The VOC emissions from the bagel oven BL2 consist mainly of ethanol from the yeast fermentation process. The potential to emit of VOC from BL2 is greater than twenty-five (25) tons per year. Since this process is not regulated by any other rule in 326 IAC 8, the Permittee is required to control VOC emissions from the bagel oven identified as BL2 pursuant to the provisions of 326 IAC 8-1-6 (BACT).

Step 1 - Identify Control Options

Based on the information reviewed for this BACT determination, the following available control technologies were identified and evaluated for controlling VOC emissions from bagel oven BL2 (listed in descending order from the most technically feasible to the least technically feasible):

(a) Catalytic Oxidizer:

Catalytic oxidation is the process of oxidizing organic contaminants in a waste gas stream within a heated chamber containing a catalyst bed in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The catalyst is used to lower the activation energy of the oxidation reaction. The residence time; temperature; flow velocity and mixing; the oxygen concentration; and type of catalyst used in the combustion chamber affect the oxidation rate and destruction efficiency. Catalytic oxidizers typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain combustion chamber temperature high enough to completely oxidize the contaminant gases. Catalytic oxidizers operate at lower temperatures and require less fuel than thermal oxidizers, they have a smaller footprint, and they need little or no insulation. Catalytic oxidizers are typically designed to have a residence time of 0.5 seconds or less and combustion chamber temperatures between 600 and 1,200°F. The types of catalysts used include platinum, platinum alloys, copper chromate, copper oxide, chromium, manganese, and nickel. These catalysts are deposited in thin layers on an inert substrate, usually a honeycomb shaped ceramic.

The two types of catalytic oxidation systems include recuperative and regenerative catalytic oxidizers, which are differentiated by the type of heat recovery equipment used. In a recuperative catalytic oxidizer, the waste gas stream is preheated using the heat content of the treated gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. In a regenerative thermal oxidizer, a high-density media such as a packed ceramic bed, which was heated in a previous cycle, is used to preheat the incoming waste gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. VOC destruction efficiencies greater than 98% are achievable under certain operating conditions (EPA-453/R-92-017). However, based on the information reviewed for this BACT determination, a VOC destruction efficiency of 95% or a VOC outlet concentration of 10 ppmv or less is achievable on a consistent basis under normal operational conditions for a typical bakery oven.

(b) Thermal Oxidizer:

Thermal oxidation is the process of oxidizing organic contaminants in a waste gas stream by raising the temperature above the autoignition point in the presence of oxygen for sufficient time to completely oxidize the organic contaminants to carbon dioxide and water. The residence time; temperature; flow velocity and mixing; and the oxygen concentration in the combustion chamber affect the oxidation rate and destruction efficiency. Thermal oxidizers typically require combustion of an auxiliary fuel (e.g., natural gas) to maintain a combustion chamber temperature high enough to completely oxidize the contaminant gases. Thermal oxidizers are typically designed to have a residence time of one second or less and combustion chamber temperatures between 1,200 and 2,000°F.

The three types of thermal oxidation systems include direct flame, recuperative, and regenerative thermal oxidizers, which are differentiated by the type of heat recovery equipment used. A direct flame thermal oxidizer consists of only a combustion chamber with no heat recovery equipment. In a recuperative thermal oxidizer, the waste gas stream is preheated using the heat content of the treated gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. In a regenerative thermal oxidizer, a high-density media such as a packed ceramic bed, which was heated in a previous cycle, is used to preheat the incoming waste gas stream, resulting in improved oxidizer efficiency and significant fuel cost savings. In general, thermal oxidizers are less efficient at treating waste gas streams with highly variable flow rates, since the variable flow rate results in varying residence times, combustion chamber temperature, and poor mixing. VOC destruction efficiencies greater than 98% are achievable under certain operating conditions (see EPA-453/R-92-017). However, a VOC destruction efficiency of 95% is achievable on a consistent basis under normal operational conditions for a typical bakery oven.

(c) Wet Packed Bed Scrubber:

A wet packed bed scrubber is an absorption system in which a waste gas stream interacts with a scrubbing liquid inside a contact chamber containing a bed of packing media. The scrubber strips contaminant gases from the waste gas stream through the process of dissolution. Water is the most commonly used scrubbing liquid. Other solvents may be used depending on the components of the waste gas stream. Based on information provided by vendors, a wet packed bed scrubber can achieve a VOC removal efficiency of at least 95% on a consistent basis under normal operational conditions for a typical bakery oven.

(d) Biofilter:

Biofiltration is a process in which a waste gas stream is passed through a bed of peat, compost, bark, soil, gravel, or other inorganic media in order to strip organic contaminant gases from the waste gas stream through the process of dissolution in the bed moisture and adsorption to the bed media. Under aerobic conditions, microorganisms present in the bed oxidize the organic contaminant gases within the bed to carbon dioxide, water, and additional biomass through metabolic processes. If the temperature of the waste gas stream is too high, the gas stream must be cooled to an optimum temperature before it can be treated in the biofilter in order to maintain the viability of the microorganisms. In addition, the bed must be monitored and maintained at an optimum moisture content and pH in order to prevent cracking of the bed media and to maintain the viability of the microorganisms. Based on information provided by vendors, a biofilter can achieve a VOC removal efficiency of at least 95% on a consistent basis under normal operational conditions for a typical bakery oven.

(e) Carbon Adsorption Unit:

Carbon adsorption is a process by which VOC is retained on a granular carbon surface, which is highly porous and has a very large surface-to-volume ratio. Carbon adsorption systems can operate in two phases: adsorption and desorption. Adsorption is rapid and removes most of the VOC in the stream. Eventually, the adsorbent becomes saturated with the vapors and the system's efficiency drops. The adsorbent must be regenerated or replaced soon after efficiency begins to decline. In regenerative systems, the adsorbent is reactivated with steam or hot air in order to desorb the absorbate (VOC vapors) from the adsorbent, and the adsorbate and regenerated absorbent can be recovered for reuse or disposal. Non-regenerative systems require the removal of the spent adsorbent and replacement with fresh adsorbent. Based on the information reviewed for this BACT determination, the use of carbon adsorption is infeasible because fats and oils in the gases exhausted from the bakery oven clog the carbon pores. In addition, the ethanol is difficult to strip from the carbon.

(f) Condensation Unit:

Condensation is the process by which the temperature of the waste gas stream is lowered to below the dew points of the contaminants in the waste gas. A refrigeration condenser normally provides a VOC control efficiency greater than 90%. Based on the information reviewed for this BACT determination, the condensation method is infeasible because of the low VOC concentrations and high air flows, temperatures, and moisture content in the bakery oven exhaust. In addition, the fats and oils contained in the exhaust reduce the control efficiency and create sanitation concerns.

Step 2 - Eliminate Technically Infeasible Control Options

Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of carbon adsorption and condensation are not technically feasible options for this source for the following reasons:

(a) The use of carbon adsorption is infeasible because fats and oils in the bakery oven exhaust clog carbon pores.

(b) The condensation method is infeasible because of the high air flows, temperatures, and moisture content and low VOC concentrations in the bakery oven exhaust.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

The remaining technically feasible options for controlling VOC emissions from the new bread oven are as follows (listed in descending order of most technically feasible):

Options for VOC Control	Control Efficiency (%)
Catalytic Oxidizer	95%
Thermal Oxidizer	95%
Wet Packed Bed Scrubber	95%
Biofilter	95%

IDEM is aware that that the above control technologies may be able to periodically achieve control efficiencies that exceed 95% under certain operating conditions. However, BACT must be achievable on a consistent basis under normal operational conditions. BACT limitations do not necessarily reflect the highest possible control efficiency achievable by the technology on which the emission limitation is based. The permitting authority has the discretion to base the emission limitation on a control efficiency that is somewhat lower than the optimal level. There are several reasons why the permitting authority might choose to do this. One reason is that the control efficiency achievable through the use of the technology may fluctuate, so that it would not always achieve its optimal control efficiency. In that case, setting the emission limitation to reflect the highest control efficiency would make violations of the permit unavoidable. To account for this possibility, a permitting authority must be allowed a certain degree of discretion to set the emission limitation at a level that does not necessarily reflect the highest possible control efficiency, but will allow the Permittee to achieve compliance consistently. While we recognize that greater than 95% may be achievable as an average during testing, IDEM allows for sources to include a safety factor, or margin of error, to allow for minor variations in the operation of the emission units and the control device.

Step 4 - Evaluate the Most Effective Controls and Document Results

The following sources of information were reviewed to evaluate the remaining technically feasible options for controlling VOC emissions from the bread ovens:

(a) EPA's RACT/BACT/LAER Clearinghouse (RBLC) under SIC code 2051 and under Process Type Code 70.003 (Bakery Oven), as well as, IDEM permits issued to date. The review identified the following permits with BACT requirements for bakery ovens (listed in descending order of most stringent BACT requirement, with the proposed BACT for this source included for reference):

Company	RBLC ID or Permit No.	Date Issued and State	Type of Unit	BACT Requirements	Note
Harlan Bakeries, Inc.	IDEM OAQ Permit No.: F063-24103-00059	Proposed (IN)	Bakery Oven	Catalytic oxidizer with 95% DRE or the VOC outlet concentration shall not exceed 10 ppmv. Emission Limit: 0.36 lbs/hr	Located in an Ozone Attainment Area
Freund Baking Company	RBLC ID: CA-0859 Permit No.: 328570	7/16/1997 (CA)	Bakery Oven	Catalytic oxidizer with 95.4% DRE	Located in an Ozone Non-attainment Area (at time of issuance)
Certified Grocers of California Ltd.	RBLC ID: CA-0468 Permit Nos.: 228274, 219899	9/14/1990 (CA)	Bakery Oven	Catalytic afterburner with 95% DRE	Located in an Ozone Non-attainment Area (at time of issuance)
Allen Foods Inc.	IDEM OAQ Permit No.: F039-22633-00643	7/13/2006 (IN)	Bakery Oven	Catalytic oxidizer with 95% DRE or VOC outlet concentration shall not exceed 10 ppmv	Located in an Ozone Non-attainment Area (at time of issuance)
Maple Leaf Bakery	RBLC ID: CA-0854 Permit No.: 0473-170	10/6/1998 (CA)	Bakery Oven	Catalytic oxidizer with 92% DRE	Located in an Ozone Non-attainment Area (at time of issuance)

Company	RBLC ID or Permit No.	Date Issued and State	Type of Unit	BACT Requirements	Note
Holsum Bakery	RBLC ID: AZ-0029 Permit No.: 95-0432	3/1/1996 (AZ)	Bakery Oven	Quencher/Scrubber Emission Limit: 49.9 tons/yr VOCs	Located in an Ozone Non-attainment Area (at time of issuance)
Kroger Co. – Indianapolis Bakery	IDEM OAQ Permit No.: SPR 097-16909-00161	5/1/2003 (IN)	Bakery Oven	No Add On Controls Required. Emission Limit: 49 tons/yr VOC from the bread oven.	Located in an Ozone Non-attainment Area (at time of issuance)
Holsum of Fort Wayne, Inc.	IDEM OAQ Permit No.: SPM 091-21007-00106	7/26/2005 (IN)	Bakery Oven	No Add On Controls Required. Emission Limit: 60 tons/yr VOC from the bread oven.	Located in an Ozone Non-attainment Area (at time of issuance)
Interstate Brands	IDEM OAQ Permit No.: F097-7413-00171	12/12/1997 (IN)	Bakery Oven	No Add On Controls Required. Emission Limit: 91.4 tons/yr VOC from the entire source.	Located in an Ozone Attainment Area (at time of issuance)
Automatic Rolls of Virginia, Inc.	RBLC ID: VA-0110 Permit No.: (7) 40761	02/19/1988 (VA)	Bakery Oven	Emission Limit: 13.8 lbs/hr VOC	

DRE = destruction and removal efficiency

(b) In addition to the individual source determinations listed above, IDEM has also discovered that the South Coast Air Quality Management District (SCAQMD) of the State of California regulates commercial bakery ovens under the provisions of Rule 1153 - Commercial Bakery Ovens (Adopted January 4, 1991, Amended January 13, 1995). Pursuant to SCAQMD Rule 1153(c)(2), no person shall operate a new bakery oven unless VOC emissions are reduced by at least 95 percent by weight (as carbon) if the uncontrolled average daily VOC emissions are 50 pounds or more.

(c) Since the primary VOC emitted from the bagel oven BL2 is ethanol, RACT determinations performed by IDEM for ethanol emissions from ethanol plants were reviewed. Dry mill ethanol plants that use fermentation, distillation, and dehydration to produce ethanol and dried distillers grain and solubles (DDGS) and have combined potential VOC emissions of twenty-five (25) tons or more per year from fermentation, distillation, dehydration, DDGS dryer or dryers, and ethanol load-out operations are subject to the RACT decision in 326 IAC 8-5-6. Pursuant to 326 IAC 8-5-6, the owner or operator of a plant subject to this rule must install a thermal oxidizer, a wet scrubber, or an enclosed flare to control VOC emissions. Each type of control device must have an overall control efficiency of not less than ninety-eight percent (98%) or must result in a VOC concentration of not more than ten (10) parts per million (ppm).

In comparing a bakery oven to each of the above processes at an ethanol plant, there are major differences that affect the control efficiency. An ethanol plant has process stream flow rates and VOC loadings that are typically at a steady state process condition. However, a typical bakery oven experiences multiple variations of flow rate, formulations, water content, VOC loading, and temperature, resulting in a lower and variable VOC control efficiency for each of the feasible control technologies. Based this rationale and the information reviewed for this BACT determination, IDEM has determined that the remaining technically feasible options can achieve a 95% overall control efficiency for VOC emissions from the bread oven on a consistent basis under normal operational conditions.

(d) Harlan Bakeries, Inc. provided IDEM, OAQ with a thorough economic analysis of the technically feasible control options. The analysis estimated the cost of the VOC control equipment, including the initial capital cost of the various components intrinsic to the complete system, and the estimated annual operating costs. The basic equipment costs were obtained from vendor's quoted prices, from information contained in the EPA Cost Analysis Manual, and from the BACT analysis for FESOP 039-22633-00643 for Allen Foods, Inc. issued on July 13, 2006. Annualized costs were developed based on information from the vendors and a literature review. The analysis assumed an interest rate of 7% and an equipment life of 10 years. The basis of cost effectiveness, used to evaluate the control options, is the ratio of the annualized cost to the amount of VOC (tons) removed per year. A complete breakdown of the costs associated with the

Regenerative Thermal Oxidizer (RTO), the Catalytic Oxidizer, Biofiltration, and the Wet Packed Bed Scrubber are included in Appendix C. A summary of the cost figures determined in the analysis is provided in the table below.

Option	Total Annualized Costs ($/yr)	Potential VOC removal (tons/yr)**	Cost Effectiveness ($/ton VOC removed)
Regenerative Thermal Oxidizer (RTO) (95.0% overall reduction*)	$166,309	30.1	$5,524
Catalytic Oxidizer (95.0% overall reduction*)	$150,432	30.1	$4,996
Biofiltration (95.0% overall reduction*)	$342,761	30.1	$11,384
Wet Packed Bed Scrubber (95% overall reduction*)	$318,465	30.1	$10,577

*Note: Overall Reduction Efficiency = Control Efficiency x Capture Efficiency (100%)
**Note: The VOC removal (tons/yr) is the VOC removal after the source has accepted limits on the process.

Step 5 - Select BACT

Based on the information presented above:

(a) Catalytic oxidizer is the most cost-effective technically feasible control option for controlling VOCs from the bagel oven and is the primary control technology used throughout the country for controlling VOC emissions from large bakery ovens. The most stringent BACT requirement previously established for a large bakery oven was catalytic oxidation with an overall VOC control efficiency of at least 95.4% (see Freund Baking Company (CA-0859)). However, as discussed in Step 3, the overall control efficiency must be achievable on a consistent basis under normal operational conditions. Therefore, IDEM has determined that BACT for this oven will be a catalytic oxidizer with an overall control efficiency of 95% and a VOC concentration of 10 ppm.

(b) Regenerative Thermal Oxidizer (RTO) was not selected as BACT for the bagel oven even though it can achieve the same control efficiency as the catalytic oxidizer, because the catalytic oxidizer is the most cost-effective technically feasible control option.

(c) Wet packed bed scrubber was not selected as BACT for the bagel oven, since it would require substantial amounts of water requiring treatment at a wastewater treatment plant (WWTP). Although the scrubber could control VOC emissions from the bagel oven at a control efficiency of 95%, VOCs could potentially volatilize from the wastewater during the transference or conveyance to the WWTP, as well as, during treatment at the WWTP. To avoid this problem, the sewage system and WWTP would need to be designed to minimize the volatilization of VOCs or capture and control VOCs emitted the ambient air.

(d) Biofiltration was not selected as BACT for the bagel oven, since cooling of the hot oven exhaust prior to the biofilter could result in fat and oil condensation problems and the biofilter beds would require significant amount of space at the bakery. (EPA-453/R-92-017)

IDEM, OAQ has determined that the following requirements represent BACT for the bagel oven BL2 at the source:

(a) The VOC emissions from the bagel oven BL2 shall be controlled by a catalytic oxidizer.

(b) The overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv.

(c) The VOC emissions from the bagel oven BL2 shall not exceed 0.36 pounds per hour. The emission limit above was calculated as follows:

Emission Limit (lbs/hr) = PTE (tons/yr)*(1 - Control Efficiency)*(2,000 lbs/ton)*(1 yr/8,760 hrs)

Emission Limit (lbs/hr) = (31.7 tons/yr)*(1 - 0.95)*(2,000 lbs/ton)*(1 yr/8,760 hrs) = 0.36 lbs/hr

Appendix C: Cost Analysis for Control Devices for BL2

Company Name: Harlan Bakeries, Inc.
Location: 7597 E. US Highway 36, Avon, Indiana 46123
FESOP: 063-24103-00059
Reviewer: ERG/SE
Date: November 13, 2007

			Recuperative Thermal Oxidizer	Catalytic Oxidizer	Biofiltration [1]	Scrubber [1]
I. Capital Cost	(formula)					
1. Purchased Equipment:						
Basic Equipment & Auxiliaries (A)			$146,092	$200,000		
Instrument Cost	0.1	A	$14,609	$20,000		
Taxes	0.05	A	$7,305	$10,000		
Freight	0.05	A	$7,305	$10,000		
Total Purchase Cost (B)			**$175,310**	**$240,000**		
2. Direct Installation Costs:						
Foundations & Supports	0.08	B	$14,025	$19,200		
Erection & Handling	0.14	B	$24,543	$33,600		
Electrical	0.04	B	$7,012	$9,600		
Piping	0.02	B	$3,506	$4,800		
Insulation	0.01	B	$1,753	$2,400		
Painting	0.01	B	$1,753	$2,400		
Site Preparation (As Required)						
Facilities and buildings (As required)						
Total Direct Installation Cost (C)			**$52,593**	**$72,000**	**$0**	**$0**
Total Direct Capital Cost (TDC)		**(B+C)**	**$227,904**	**$312,000**	**$297,456**	**$209,856**
3. Indirect Costs:						
Engineering	0.1	B	$17,531	$24,000		
Loss of Production Cost			$0	$0		
Construction & Field Expenses	0.05	B	$8,766	$12,000		
Contractor Fees	0.1	B	$17,531	$24,000		
Start Up and Performance Tests	0.03	B	$5,259	$7,200		
Contingencies	0.03	B	$5,259	$7,200		
Total Indirect Cost (D)			**$54,346**	**$74,400**	**$224,615**	**$199,102**
Total Install Capital Cost		**(B+C+D)**	**$282,250**	**$386,400**	**$522,071**	**$408,958**
Capital Recovery Factor (7%, 10 year)			0.14238	0.14238	0.14238	0.14238
Capital Recovery Cost (E)			**$40,187**	**$55,016**	**$74,332**	**$58,227**

II. ANNUALIZED COSTS

1. Direct Operating Costs:					
Operating Labor (F)		$7,076	$7,076	$7,076	$7,076
a. Number of Employees		*1*	*1*	*1*	*1*
b. Cost/Employee/Hour [2]		*$13.0*	*$13.0*	*$13.0*	*$13.0*
c. Operating Hours/Year		*546*	*546*	*546*	*546*
Supervisory Labor (F1)	0.15 F	$1,061	$1,061	$1,061	$1,061
Maintenance Labor (F2)		$7,786	$7,786	$7,786	$7,786
a. Number of Employees		*1*	*1*	*1*	*1*
b. Cost/Employee/Hour [2]		*$14.3*	*$14.3*	*$14.3*	*$14.3*
c. Operating Hours/Year		*546*	*546*	*546*	*546*
Maintenance Material (F3)	1 F2	$7,786	$7,786	$7,786	$7,786
Utilities					
a. Natural Gas		$244,014	$90,794	$0	$0
MMBTU/HR Input		*2.89*	*1.08*	*0.00*	*0.00*
Operating Hours/Year		*8,760*	*8,760*	*8,760*	*8,760*
Cost/MMBTU [3]		*$9.64*	*$9.64*	*$9.64*	*$9.64*
b. Electricity		$3,693	$4,247	$2,771	$2,771
KW Requirements/Hr		*7.36*	*8.46*	*5.52*	*5.52*
KWH/YR		*8,760*	*8,760*	*8,760*	*8,760*
Cost/KWH [4]		*$0.06*	*$0.06*	*$0.06*	*$0.06*
Water		$0	$0	$199,557	$195,618
Air		$0	$0	$0	$0
Replacement Parts		$0	$6,000	$7,283	$7,555
Total Direct Operating Cost (G)		**$271,416**	**$124,751**	**$233,320**	**$229,653**
2. Indirect Operating Costs:					
Overhead	0.6 (F+F1+F2+F3)	$14,226	$14,226	$14,226	$14,226
Property Tax, Insurance, and Administrative Costs	0.04 (B+C+D)	$11,290	$15,456	$20,883	$16,358
Total Indirect Operating Cost (H)		**$25,516**	**$29,682**	**$35,109**	**$30,584**
3. Heat Recovery Credits (I):		**$170,809**	**$59,016**	**$0**	**$0**
MMBTU/HR Input		*2.89*	*1.08*	*0.00*	*0.00*
Operating Hours/Year		*8,760*	*8,760*	*8,760*	*8,760*
Unit Heat Efficiency		*100%*	*100%*	*0%*	*0%*
Heat Exchange Efficiency		*100%*	*100%*	*0%*	*0%*
Percent Heat Recovery		*70%*	*65%*	*0%*	*0%*
Cost/MMBTU		*$9.64*	*$9.64*	*$9.64*	*$9.64*
Total Annual Operating Cost	**(G+H-I)**	**$126,122**	**$95,416**	**$268,429**	**$260,237**
Total Annual Cost	**(E+G+H-I)**	**$166,309**	**$150,432**	**$342,761**	**$318,465**
Unlimited PTE (tons/yr)		**31.7**	**31.7**	**31.7**	**31.7**
Destruction Efficiency		**95%**	**95%**	**95%**	**95%**
Capture Efficiency		**100%**	**100%**	**100%**	**100%**
Overall Control Efficiency		**95%**	**95%**	**95%**	**95%**
Pollution Removed (tons/yr)		**30.1**	**30.1**	**30.1**	**30.1**
Cost Effectiveness		**$5,524**	**$4,996**	**$11,384**	**$10,577**

[1] The source provided the Total Direct Capital Cost and Total Indirect Cost for the Biofiltration and Scrubber based on the costs provided in the BACT analysis for Allen Foods (F039-22633-00643, issued July 13, 2006). The Total Direct Capital Cost and Total Indirect Cost from Allen Foods were scaled to the size needed for Harlan Bakeries, Inc. using an equation from "Guidance for Estimating Capital and Annual Costs of Air Pollution Control Systems" from Ohio EPA's Engineering Guide #46.

[2] Labor costs are provided by the source.

[3] This is the average price per MMBtu of natural gas for industrial use in Indiana in 2005 from the webpage for Energy Information Administration. http://www.eia.doe.gov/

[4] This is the national average price for industrial use in 2005 (for Electricity) from the webpage for Energy Information Administration. http://www.eia.doe.gov/