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: March 30, 2012

RE: Allen Foods, Inc. / 039-29392-00643

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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Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Allen Foods, Inc.
53075 Frederic Dr
Elkhart, Indiana 46514

(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.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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 FESOP under 326 IAC 2-8.

Operation Permit No.: F039-29392-00643	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: March 30, 2012 Expiration Date: March 30, 2022

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Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

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 through A.3 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 2-8-3(b)]

The Permittee owns and operates a stationary commercial bakery.

Source Address:	53075 Frederic Dr, Elkhart, Indiana 46514
General Source Phone Number:	574-206-8250
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State 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 [326 IAC 2-8-3(c)(3)]

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

(a) One (1) english muffin line, identified as Line 001, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 001, with a heat input capacity of 2.85 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30; and

(2) One (1) proof box, identified as Line 001 Proof Box.

(b) One (1) english muffin line, identified as Line 027, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1), natural gas-fired baking oven, identified as emission unit 027, with a heat input capacity of 2.40 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30.

(2) One (1) proof box, identified as Line 027 Proof Box.

(c) One (1) bread line, identified as Line 028, constructed in 2006, with a maximum throughput capacity of 7.20 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 028, with a heat input capacity of 10.08 MMBtu per hour, with VOC emissions controlled by one (1) 3.0 MMBtu/hr natural gas-fired catalytic oxidizer identified as emission unit 029, exhausting through one (1) vent (S17); and

(2) One (1) proof box, identified as Line 028 Proof Box.

(d) One (1) dry ingredient storage and conveyance system, installed in 2006, including, but not limited to, pneumatic conveyance process equipment and piping, storage silos, use bins, weigh scale hoppers, ingredient mixers, transfer equipment, other process equipment and piping, and associated pollution control equipment, with a maximum capacity of 14,310 pounds of dry ingredients per hour. The pneumatic conveyance system includes the following emission units:

(1) two (2) dry ingredient storage silos, identified as emission units 021 and 022, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(2) five (5) dry ingredient storage silos, identified as emission units 030 through 034, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(3) two (2) dry ingredient use bins, identified as emission units 035 and 036, installed in 2006, each with a maximum storage capacity of 2,000 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(4) one (1) dusting flour use bin, identified as emission unit 037, installed in 2006, with a maximum storage capacity of 2,000 pounds of dusting flour, and equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(5) four (4) muffin scale hoppers, identified as emission units 038 through 041, installed in 2006, each with a maximum storage capacity of 800 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(6) three (3) bread scale hoppers, identified as emission units 042 through 044, installed in 2006, each with a maximum storage capacity of 1,600 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(7) two (2) dusting flour hoppers, identified as emission units 045 and 046, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

(a) one (1) auxiliary boiler, burning natural gas, identified as emission unit 002, installed in 2006, rated at 1 MMBtu per hour;

(b) one (1) process hot water heater, burning natural gas, identified as emission unit 003, installed in 2006, rated at 0.54 MMBtu per hour;

(c) one (1) domestic hot water heater, burning natural gas, identified as emission unit 004, installed in 2006, rated at 0.3 MMBtu per hour;

(d) five (5) space heaters, burning natural gas, identified as emission units 005 through 009, installed in 2006, each rated at 3.5 MMBtu per hour; and

(e) eleven (11) space heaters, burning natural gas, identified as emission units 010 through 020, installed in 2006, each rated at 0.12 MMBtu per hour.

(f) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F039-29392-00643, is issued for a fixed term of ten (10) 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 [326 IAC 2-8-6] [IC 13-17-12]

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 [326 IAC 2-8-4(4)]

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 [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

(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. 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 [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent 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 Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

(b) The annual compliance certification report 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) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, 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 and Enforcement 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) 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. The

PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) 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.12 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F039-29392-00643 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.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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
Permit Administration and Support Section, 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 nine (9) months 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 2-8 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, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][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 FESOP 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.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) 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.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [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 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 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 that meets the requirements of 326 IAC 2-8-5(a)(1) 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 Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.10 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(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 [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to 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 excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning 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 normal or usual manner of operation.

(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 record the reasonable response steps taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(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. Support information includes the following:

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions

satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) 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.

(d) 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.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Bread and Muffin Lines

(a) One (1) english muffin line, identified as Line 001, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 001, with a heat input capacity of 2.85 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30; and

(2) One (1) proof box, identified as Line 001 Proof Box.

(b) One (1) english muffin line, identified as Line 027, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1), natural gas-fired baking oven, identified as emission unit 027, with a heat input capacity of 2.40 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30.

(2) One (1) proof box, identified as Line 027 Proof Box.

(c) One (1) bread line, identified as Line 028, constructed in 2006, with a maximum throughput capacity of 7.20 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 028, with a heat input capacity of 10.08 MMBtu per hour, with VOC emissions controlled by one (1) 3.0 MMBtu/hr natural gas-fired catalytic oxidizer identified as emission unit 029, exhausting through one (1) vent (S17); and

(2) One (1) proof box, identified as Line 028 Proof Box.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 New Facilities, General Reduction Requirements [326 IAC 8-1-6] [326 IAC 2-8-4] [326 IAC 2-2]

(a) Pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements), the Permittee shall control the VOC emissions from the two (2) English muffin lines (Line 001 and Line 027) using the Best Available Control Technology (BACT), which has been determined to be the following:

(1) The VOC emissions from baking oven 001 and baking oven 027 shall be controlled by a single catalytic oxidizer (030).

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

(3) The combined VOC emissions from baking oven 001 and baking oven 027, exhausting through the common stack S30, shall not exceed 1.52 lbs/hr.

(4) The Permittee shall operate Line 001 (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(5) The Permittee shall operate Line 027 (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(6) In order to ensure proper operation and to minimize potential emissions, the Permittee shall perform proof box cleaning operations for the proof box associated with Line 001, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(A) Weekly Cleaning Procedure:

(i) Knock down all dough and residue from interior framework;
(ii) Sweep floor;
(iii) Use floor scraper for excess debris;
(iv) Foam floor and scrub with brush;
(v) Rinse Floor;

(7) In order to ensure proper operation and to minimize potential emissions, the Permittee shall perform proof box cleaning operations for the proof box associated with Line 001, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(A) Weekly Cleaning Procedure:

(i) Knock down all dough and residue from interior framework;
(ii) Sweep floor;
(iii) Use floor scraper for excess debris;
(iv) Foam floor and scrub with brush;
(v) Rinse Floor;

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

(b) IDEM has determined that the best available control technology (BACT) to control VOC emissions from the bread line (Line 028) shall be as follows:

(1) The VOC emissions from baking oven 028 shall be controlled by a catalytic oxidizer (029).

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

(3) The VOC emissions from baking oven 028, exhausting through vent S17, shall not exceed 2.29 lbs/hr.

(4) The Permittee shall operate bread line (Line 028) (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(5) In order to ensure proper operation and to minimize potential emissions, the Permittee shall perform proof box cleaning operations for the proof box associated with Line 028,

on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(A) Knock down all dough and residue from interior framework;
(B) Sweep floor;
(C) Use floor scraper for excess debris;
(D) Foam floor and scrub with brush; and
(E) Rinse Floor.

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

Compliance with these limits combined with the potential VOC emissions from all other emission units at this source will limit the source-wide total potential to emit of VOCs to less than 100 tons per 12 consecutive month period, will satisfy 326 IAC 2-8-4 (FESOP), and will render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for these facilities. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 2-8-4] [326 IAC 2-2]

In order to comply with Condition D.2.1, the catalytic oxidizers shall be in operation and control emissions from the baking ovens at all times the baking ovens are in operation.

D.1.4 Testing Requirements [326 IAC 3-6] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with the Best Available Control Technology (BACT) requirements in Condition D.1.1 for the baking ovens, the Permittee shall perform VOC (including emission rate and overall control efficiency of the catalytic oxidizer) testing for:

(a) the one (1) catalytic oxidizer, identified as 030 for baking ovens 001 and 027, no later than 180 days after issuance of this permit, F-039-29392-00643. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

(b) the one (1) catalytic oxidizer, identified as 029, for baking oven 028, at least once every five years from the date of the most recent valid compliance demonstration.

Testing shall be conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements

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. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average. From the date of startup until the stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the 3-hour average temperature of 600°F.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Condition D.1.1.

(c) On and after the date the approved stack test results are available, the Permittee shall operate the catalytic oxidizer at or above the 3-hour average temperature as observed during the compliant stack test.

D.1.6 Parametric Monitoring

(a) The duct pressure or fan amperage shall be observed at least once per day when the catalytic oxidizer is in operation.

(b) 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 the limit in Conditions D.1.1(a)(2), D.1.1(a)(3), D.1.1(b)(2) and D.1.1(b)(3).

(c) On and after the date that the stack test results are available for the catalytic oxidizer, 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 Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.5, and D.1.6, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC BACT limit established in condition D.1.1.

(1) The continuous temperature records (on a 3-hour average basis) for the catalytic oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(2) Daily records of the duct pressure or fan amperage of the capture system for the catalytic oxidizer. The Permittee shall include in its daily record when a duct pressure or fan amperage reading is not taken and the reason for the lack of a reading, (i.e. the process did not operate that day).

(b) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) One (1) dry ingredient storage and conveyance system, installed in 2006, including, but not limited to, pneumatic conveyance process equipment and piping, storage silos, use bins, weigh scale hoppers, ingredient mixers, transfer equipment, other process equipment and piping, and associated pollution control equipment, with a maximum capacity of 14,310 pounds of dry ingredients per hour. The pneumatic conveyance system includes the following emission units:

(1) two (2) dry ingredient storage silos, identified as emission units 021 and 022, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(2) five (5) dry ingredient storage silos, identified as emission units 030 through 034, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(3) two (2) dry ingredient use bins, identified as emission units 035 and 036, installed in 2006, each with a maximum storage capacity of 2,000 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(4) one (1) dusting flour use bin, identified as emission unit 037, installed in 2006, with a maximum storage capacity of 2,000 pounds of dusting flour, and equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(5) four (4) muffin scale hoppers, identified as emission units 038 through 041, installed in 2006, each with a maximum storage capacity of 800 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(6) three (3) bread scale hoppers, identified as emission units 042 through 044, installed in 2006, each with a maximum storage capacity of 1,600 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(7) two (2) dusting flour hoppers, identified as emission units 045 and 046, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(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 2-8-4(1)]

D.2.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from each of the following dry ingredient storage and conveying emission units shall not exceed the allowable particulate emission rate as listed in the table below:

Emission Unit Type	Maximum Process Weight Rate (tons/hr)	326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hr)
Each Dry Ingredient Storage Silo	16.68	27.0
Each Dry Ingredient Use Bin	9.75	18.9
Dusting Flour Use Bin	9.75	18.9
Each Muffin Scale Hopper	7.50	15.8
Each Bread Scale Hopper	7.50	15.8

The pound per hour limitations were calculated with the following equation:

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour

D.2.2 Particulate Emission Limitations [326 IAC 2-2]

In order to render 326 IAC 2-2, the particulate matter (PM) emissions from the dry ingredient storage and conveying emission units shall be limited as follows:

Emission Unit Type	Total Dry Ingredient Throughput Limit (tons/year)*	PM Limit (lbs/ton)
7 Dry Ingredient Storage Silos (021, 022, 030, 031, 032, 033, and 034)	62,678	0.314
3 Use Bins (035, 036, and 037)	62,678	0.314
9 Hoppers (038, 039, 040, 041, 042, 043, 044, 045 and 046)	62,678	0.314

* Total dry ingredient throughput limit in tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits combined with the potential PM emissions from all other emission units at this source will limit the source-wide total potential to emit of PM, to less than 250 tons per 12 consecutive month period, and will render 326 IAC 2-2 (PSD) not applicable.

D.2.3 Particulate Emission Limitations [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8, PM10 and PM2.5 emissions from the dry ingredient storage and conveying emission units shall be limited as follows:

Emission Unit Type	Total Dry Ingredient Throughput Limit (tons/year)*	PM10 Limit (lbs/ton)	PM2.5 Limit (lbs/ton)
7 Dry Ingredient Storage Silos (021, 022, 030, 031, 032, 033, and 034)	62,678	0.110	0.110
3 Use Bins (035, 036, and 037)	62,678	0.110	0.110

9 Hoppers (038, 039, 040, 041, 042, 043, 044, 045 and 046)	62,678	0.110	0.110

* Total dry ingredient throughput limit in tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits combined with the potential PM10, and PM2.5 emissions from all other emission units at this source will limit the source-wide total potential to emit of PM10, and PM2.5 to less than 100 tons per 12 consecutive month period, and will render 326 IAC 2-7 (Part 70 Permits) not applicable.

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for the dry ingredient storage and conveying emission units and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.5 Particulate Control

(a) In order to comply with Conditions D.2.1, D.2.2 and D.2.3, particulate from each of the dry ingredient storage and conveying emission units shall be controlled by a filter unit at all times that each of the dry ingredient storage and conveying emission units is in operation.

(b) In the event that filter failure is observed in a multi-compartment filter unit, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [**326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

D.2.6 Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with each of the dry ingredient storage and conveying emission units, at least once per day when the process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 5.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

(b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months.

D.2.7 Broken or Failed Filter Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.8 Record Keeping Requirements

(a) To document the compliance status with Conditions D.2.2 and D.2.3, the Permittee shall maintain monthly records of the total amount (in tons) of dry ingredient input to the seven (7) dry ingredient storage silos (021, 022, 030, 031, 032, 033, and 034).

(b) To document the compliance status with Conditions D.2.2 and D.2.3, the Permittee shall maintain monthly records of the total amount (in tons) of dry ingredient input to the three (3) use bins (035, 036, and 037).

(c) To document the compliance status with Conditions D.2.2 and D.2.3, the Permittee shall maintain monthly records of the total amount (in tons) of dry ingredient input to the nine (9) hoppers (038, 039, 040, 041, 042, 043, 044, 045 and 046).

(d) To document the compliance status with Condition D.2.6, the Permittee shall maintain daily records of the pressure drop across the baghouse controlling the dry ingredient storage and conveying emission units. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).

(e) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.2.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.2 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Indirect Heating Units

(a) one (1) auxiliary boiler, burning natural gas, identified as emission unit 002, installed in 2006, rated at 1 MMBtu per hour;

(b) one (1) process hot water heater, burning natural gas, identified as emission unit 003, installed in 2006, rated at 0.54 MMBtu per hour;

(c) one (1) domestic hot water heater, burning natural gas, identified as emission unit 004, installed in 2006, rated at 0.3 MMBtu per hour;

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, the particulate emissions from the auxiliary boiler, process hot water heater, and domestic hot water heater shall not exceed 0.6 pounds per million British thermal unit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Allen Foods, Inc.
Source Address: 53075 Frederic Dr, Elkhart, Indiana 46514
FESOP Permit No.: F039-29392-00643

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Allen Foods, Inc.
Source Address: 53075 Frederic Dr, Elkhart, Indiana 46514
FESOP Permit No.: F039-29392-00643

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Allen Foods, Inc.
Source Address: 53075 Frederic Dr, Elkhart, Indiana 46514
FESOP Permit No.: F039-29392-00643
Facility: Seven (7) Dry Ingredient Storage Silos (021, 022, 030, 031, 032, 033, and 034)
Parameter: Total amount (in tons) of dry ingredient input
Limit: 62,678 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Allen Foods, Inc.
Source Address: 53075 Frederic Dr, Elkhart, Indiana 46514
FESOP Permit No.: F039-29392-00643
Facility: Three (3) Use Bins (035, 036, and 037)
Parameter: Total amount (in tons) of dry ingredient input
Limit: 62,678 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Allen Foods, Inc.
Source Address: 53075 Frederic Dr, Elkhart, Indiana 46514
FESOP Permit No.: F039-29392-00643
Facility: Nine (9) Hoppers (038, 039, 040, 041, 042, 043, 044, 045 and 046)
Parameter: Total amount (in tons) of dry ingredient input
Limit: 62,678 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Allen Foods, Inc.
Source Address: 53075 Frederic Dr, Elkhart, Indiana 46514
FESOP Permit No.: F039-29392-00643

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

ATTACHMENT A

FUGITIVE DUST CONTROL PLAN

(a) Fugitive particulate matter emissions from paved roads and paved parking lots shall be controlled by cleaning by vacuum sweeping on an as needed basis.

(b) There will be no unpaved roads or unpaved parking lots at the facility.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a FESOP Renewal

Source Background and Description

Source Name:	**Allen Foods, Inc.**
Source Location:	**53075 Frederic Dr, Elkhart, Indiana 46514**
County:	**Elkhart**
SIC Code:	**2051 (Bread and Other Bakery Products, Except Cookies and Crackers)**
Operation Permit No.:	**F039-29392-00643**
Permit Reviewer:	**Christine L. Filutze**

On February 20, 2012, the Office of Air Quality (OAQ) had a notice published in The Elkhart Truth, Elkhart, Indiana, stating that Allen Foods, Inc. had applied for a FESOP Renewal to renew their current FESOP permit. The notice also stated that the OAQ proposed to issue a FESOP Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

1. On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section B - Operational Flexibility. IDEM, OAQ has clarified the rule sites for the Preventive Maintenance Plan.

B.11 Preventative Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][~~326 IAC 2-8-5(a)(1)~~]

...

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) **and (c)** ~~through (d)~~without a prior permit revision, if each of the following conditions is met:

...

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15~~(b)(2), (c)(1), and (d)~~ **(b)(1) and (c)**. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15~~(b)(2), (c)(1), and (d)~~ **(b)(1) and (c).**

(b) Emission Trades [326 IAC 2-8-15 ~~(c)~~ **(b)**]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15 ~~(c)~~ **(b)**.

(c) Alternative Operating Scenarios [326 IAC 2-8-15 ~~(d)~~ **(c)**]
...

...

2. IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(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. **Support information includes the following:**

(AA) All calibration and maintenance records.
(BB) All original strip chart recordings for continuous monitoring instrumentation.
(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.
(BB) The dates analyses were performed.
(CC) The company or entity that performed the analyses.
(DD) The analytical techniques or methods used.
(EE) The results of such analyses.
(FF) The operating conditions as existing at the time of sampling or measurement.

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.

...

3. TSD Language: IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. **Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph**. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be

reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

...

4. The Quarterly Deviation and Compliance Monitoring Report

This report shall be submitted quarterly based on a calendar year. **Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting**. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

IDEM Contact

(a) Questions regarding this proposed FESOP Renewal can be directed to Christine L. Filutze at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-8397 or toll free at 1-800-451-6027 extension 3-8397.

(b) A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	**Allen Foods, Inc.**
Source Location:	**53075 Frederic Dr, Elkhart, Indiana 46514**
County:	**Elkhart**
SIC Code:	**2051 (Bread and Other Bakery Products, Except Cookies and Crackers)**
Permit Renewal No.:	**F039-29392-00643**
Permit Reviewer:	**Christine L. Filutze**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Allen Foods, Inc. relating to the operation of a stationary commercial bakery. On June 24, 2010, Allen Foods, Inc. submitted an application to the OAQ requesting to renew its operating permit. Allen Foods, Inc. was issued a FESOP (F039-22633-00643) on July 13, 2006.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) english muffin line, identified as Line 001, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 001, with a heat input capacity of 2.85 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30; and

(2) One (1) proof box, identified as Line 001 Proof Box.

(b) One (1) english muffin line, identified as Line 027, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1), natural gas-fired baking oven, identified as emission unit 027, with a heat input capacity of 2.40 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30.

(2) One (1) proof box, identified as Line 027 Proof Box.

(c) One (1) bread line, identified as Line 028, constructed in 2006, with a maximum throughput capacity of 7.20 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 028, with a heat input capacity of 10.08 MMBtu per hour, with VOC emissions controlled by one (1) 3.0 MMBtu/hr natural gas-fired catalytic oxidizer identified as emission unit 029, exhausting through one (1) vent (S17); and

(2) One (1) proof box, identified as Line 028 Proof Box.

(d) One (1) dry ingredient storage and conveyance system, installed in 2006, including, but not limited to, pneumatic conveyance process equipment and piping, storage silos, use bins, weigh scale hoppers, ingredient mixers, transfer equipment, other process equipment and piping, and associated pollution control equipment, with a maximum capacity of 14,310 pounds of dry ingredients per hour. The pneumatic conveyance system includes the following emission units:

(1) two (2) dry ingredient storage silos, identified as emission units 021 and 022, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(2) five (5) dry ingredient storage silos, identified as emission units 030 through 034, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(3) two (2) dry ingredient use bins, identified as emission units 035 and 036, installed in 2006, each with a maximum storage capacity of 2,000 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(4) one (1) dusting flour use bin, identified as emission unit 037, installed in 2006, with a maximum storage capacity of 2,000 pounds of dusting flour, and equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(5) four (4) muffin scale hoppers, identified as emission units 038 through 041, installed in 2006, each with a maximum storage capacity of 800 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(6) three (3) bread scale hoppers, identified as emission units 042 through 044, installed in 2006, each with a maximum storage capacity of 1,600 pounds of dry ingredients, and each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

(7) two (2) dusting flour hoppers, identified as emission units 045 and 046, installed in 2006, each equipped with one (1) filter unit for control of particulate matter emissions, and exhausting to the indoors.

Insignificant Activities

The source also consists of the following insignificant activities:

(a) one (1) auxiliary boiler, burning natural gas, identified as emission unit 002, installed in 2006, rated at 1 MMBtu per hour;

(b) one (1) process hot water heater, burning natural gas, identified as emission unit 003, installed in 2006, rated at 0.54 MMBtu per hour;

(c) one (1) domestic hot water heater, burning natural gas, identified as emission unit 004, installed in 2006, rated at 0.3 MMBtu per hour;

(d) five (5) space heaters, burning natural gas, identified as emission units 005 through 009, installed in 2006, each rated at 3.5 MMBtu per hour; and

(e) eleven (11) space heaters, burning natural gas, identified as emission units 010 through 020, installed in 2006, each rated at 0.12 MMBtu per hour.

(f) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

Existing Approvals

Since the issuance of the FESOP (F039-22633-00643) on July 13, 2006, the source has not constructed or been operating under any additional approvals.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Air Pollution Control Justification as an Integral Part of the Process

Pursuant to FESOP No. F039-22633-00643, issued on July 13, 2006, the applicant had submitted the following justification for considering each of the filter units controlling the silos, use bins, and scale hoppers as an integral to the pneumatic conveyance process:

The company stated that each of the filter units associated with the silos, use bins, and scale hoppers are necessary to pneumatically transfer dry ingredients in the process, with each filter unit relieving pressure and minimizing product loss when each vessel is being filled or emptied. The dry ingredients recovered by the filter units are recycled back in to the process (i.e., internally discharge back into each vessel). The company provided a schematic diagram of the silo system. The filter unit exhaust is vented inside the building with no direct exhaust to the outside air.

IDEM, OAQ had evaluated the justifications and determined that the filter units were not considered as an integral part of the pneumatic conveyance process. IDEM, OAQ determined that while the filter units are necessary to neutralize the bin pressure, the filter units provide pollution control and the process could continue to be operated without the filter units in place. In addition, the recycled material does not make up 85% or greater of the raw material used in the process. Therefore, the permitting level will be determined using the potential to emit before the filter units.

This conclusion was initially determined under FESOP No. F039-22633-00643 on July 13, 2006 and remain the same in this renewal.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

(a) See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective July 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Elkhart
County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 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) Other Criteria Pollutants
Elkhart 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.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions*	
Pollutant	Tons/year
PM	295.57
PM_{10}	104.83
$PM_{2.5}$	104.83
SO_2	0.11
VOC	303.62
CO	15.63
NO_x	18.61
GHGs as CO_2e	22,469
Single HAP	4.58 (Acetaldehyde)
Total HAP	4.93

*Unrestricted Potential Emissions Less Fugitive Emissions

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5 and VOC is equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source's PM10, PM2.5 and VOC emissions to less than Title V levels, therefore the Permittee will be issued a FESOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. 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 FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM10*	PM2.5**	SO_2	NOx	VOC	CO	GHGs	Total HAPs	Worst Single HAP
English Muffin Line 001***	0.02	0.09	0.09	0.01	1.25	13.39	1.05	1,507	2.22	0.78 Acetal-dehyde
English Muffin Line 027***	0.02	0.08	0.08	0.01	1.05	13.37	0.88	1,269	2.22	
Bread Line 028****	0.08	0.34	0.34	0.03	4.42	24.46	3.71	5,330	0.27	
Dry Ingredient Storage & Handling***	29.52	10.34	10.34	0.00	0.00	0.00	0.00	0	0.00	
Insignificant Natural Gas Combustion	0.23	0.90	0.90	0.07	11.90	0.65	9.99	14,362	0.22	
Fugitive Emissions from Paved Roads	4.10	0.82	0.20	0.00	0.00	0.00	0.00	0	0.00	
Total PTE of Entire Source Less Fugitives	**29.87**	**11.76**	**11.76**	**0.11**	**18.61**	**51.88**	**15.63**	**22,469**	**1.13**	**0.78**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
***Emissions from the Dry Ingredient Storage & Conveying and are Limited to render 326 IAC 2-7 and 326 IAC 2-2 not applicable.
**** VOC emissions from the Baking Ovens are limited pursuant to 326 IAC 8-1-6.

(a) This existing stationary source is not major for PSD because the emissions of each regulated pollutant, excluding GHGs, are less than two hundred fifty (<250) tons per year, emissions of GHGs are less than one hundred thousand (<100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is not in one of the twenty-eight (28) listed source categories.

Federal Rule Applicability

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

(b) The requirements of 326 IAC 12 or 40 CFR 60, Subpart DD, (60.300 through 60.304), New Source Performance Standards (NSPS) for Grain Elevators, are not included in this

permit, since this source does not contain any grain terminal elevators or grain storage elevators as defined by 40 CFR 60.301. This source contains dry ingredient (e.g. flour, corn meal, etc.) storage silos that are not equipped with grain elevators.

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

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

(a) The PM PTE of the entire source is greater than 250 tons per year. Therefore, emissions of particulate matter (PM) from the dry ingredient storage and conveying emission units shall be limited as follows to render 326 IAC 2-2 not applicable:

Emission Unit Type	Total Dry Ingredient Throughput Limit* (tons/year)	PM Limit (lbs/ton)
7 Dry Ingredient Storage Silos (021, 022, 030, 031, 032, 033, and 034)	62,678	0.314
3 Use Bins (035, 036, and 037)	62,678	0.314
9 Hoppers (038, 039, 040, 041, 042, 043, 044, 045 and 046)	62,678	0.314

* Total dry ingredient throughput limit in tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Limited PM = (62,678 tons/yr)(3)(0.314 lb/ton)(1 ton/2000 lb) = 29.52 tons/year

Note: These are existing limits and are not changed in this renewal.

(b) The existing PM10 and PM2.5 limits to render 326 IAC 2-2 not applicable have been deleted because the PTE is already less than 250 tons per year. This is a Title I change.

Compliance with these limits combined with the potential PM emissions from all other emission units at this source will limit the source-wide total potential to emit of PM to less than 250 tons per 12 consecutive month period and will render 326 IAC 2-2 (PSD) not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The requirements of 326 IAC 2-4.1 are not applicable to this source, since the potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 2-8-4 (FESOP)

(a) Pursuant to 326 IAC 2-8-4 (FESOP), emissions of PM10 and PM2.5 from the dry ingredient storage and conveying emission units shall be limited as follows:

Emission Unit Type	Total Dry Ingredient Throughput Limit* (tons/year)	PM10 Limit (lbs/ton)	PM2.5 Limit (lbs/ton)
7 Dry Ingredient Storage Silos (021, 022, 030, 031, 032, 033, and 034)	62,678	0.110	0.110
3 Use Bins (035, 036, and 037)	62,678	0.110	0.110
9 Hoppers (038, 039, 040, 041, 042, 043, 044, 045 and 046)	62,678	0.110	0.110

* Total dry ingredient throughput limit in tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Limited PM10 = (62,678 tons/yr)(3)(0.11 lb/ton)(1 ton/2000 lb) = 10.34 tons/year

Note: ThePM10 limits are existing limits and are not changed in this renewal. The PM2.5 limits are new requirements to the source. This is a Title I change.

(b) The source shall comply with the following VOC emission limit:

The VOC emissions from the baking oven (028) (after control) shall not exceed 2.29 pounds per hour.

Note: This VOC limit that renders 326 IAC 2-7 not applicable is similar to the VOC BACT limit pursuant to 326 IAC 8-1-6. This same VOC limit will also renders 326 IAC 2-2 (PSD) not applicable.

Note: This is an existing limit and is not changed in this renewal.

Compliance with these limits combined with the potential PM10 and VOC emissions from all other emission units at this source will limit the source-wide total potential to emit of PM10 and VOCs to less than 100 tons per 12 consecutive month period, will satisfy 326 IAC 2-8-4 (FESOP), and will render 326 IAC 2-7 (Part 70 Permits) not applicable.

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 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.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 PM Limitations for Lake County
This source is not subject to 326 IAC 6.8 because it is not located in Lake County.

State Rule Applicability – Individual Facilities

State Rule Applicability - English Muffin & Bread Lines (001, 027, 028)

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

(a) English Muffin Line (001)
IDEM has determined that the best available control technology (BACT) to control VOC emissions from the english muffin line 001 shall be as follows:

(1) The VOC emissions from baking oven 001 shall be controlled by a catalytic oxidizer.

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

(3) The combined VOC emissions from the baking oven 001, exhausting through stack S30, shall not exceed 1.52 lbs/hr.

(4) The source shall operate Line 001 (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(5) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box associated with Line 001, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(A) Weekly Cleaning Procedure:

(i) Knock down all dough and residue from interior framework;
(ii) Sweep floor;
(iii) Use floor scraper for excess debris;
(iv) Foam floor and scrub with brush;
(v) Rinse Floor;

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

This is a new requirement.

(b) English Muffin Line (027)
IDEM has determined that the best available control technology (BACT) to control VOC emissions from the english muffin lines 027 shall be as follows:

(1) The VOC emissions from baking oven 027 shall be controlled by a catalytic oxidizer.

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

(3) The combined VOC emissions from the baking oven 027, exhausting through stack S30, shall not exceed 1.52 lbs/hr.

(4) The source shall operate Line 027 (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(5) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box associated with Line 027, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(A) Weekly Cleaning Procedure:

(i) Knock down all dough and residue from interior framework;
(ii) Sweep floor;
(iii) Use floor scraper for excess debris;
(iv) Foam floor and scrub with brush;
(v) Rinse Floor;

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

This is a new requirement.

Note: catalytic oxidizer, identified as 030, is common control for baking oven 001 and baking oven 027.

(c) Bread Line (028)
IDEM has determined that the best available control technology (BACT) to control VOC emissions from the baking oven (028), shall be as follows:

(1) The VOC emissions from baking oven 028 shall be controlled by a catalytic oxidizer.

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

(3) The VOC emissions from the baking oven 028, exhausting through stack S30, shall not exceed 2.29 lbs/hr.

(4) The source shall operate bread line (Line 028) (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(5) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box associated with Line 028, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

Weekly Cleaning Procedure:

(A) Knock down all dough and residue from interior framework;
(B) Sweep floor;
(C) Use floor scraper for excess debris;

(D) Foam floor and scrub with brush; and
(E) Rinse Floor.

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

This is an existing requirement.

(d) The requirements of 326 IAC 8-1-6 are not applicable to all the other emission units at this source, since they each do not have the potential to emit greater than twenty-five (25) tons of VOCs per year. There are no other rules within 326 IAC 8 that are applicable to all the other emission units at this source.

State Rule Applicability - Dry Ingredient Storage and Conveying

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

The requirements of 326 IAC 6-3 are applicable to each of the dry ingredient storage and conveying emission units. Pursuant to 326 IAC 6-3-2(e)(2), the particulate emissions from each of the following dry ingredient storage and conveying emission units shall not exceed the allowable PM emission rate as listed in the table below:

Emission Unit Type	Maximum Process Weight Rate (tons/hr)	326 IAC 6-3-2 Allowable PM Emission Rate (lbs/hr)
Each Dry Ingredient Storage Silo	16.68	27.0
Each Dry Ingredient Use Bin	9.75	18.9
Dusting Flour Use Bin	9.75	18.9
Each Muffin Scale Hopper	7.50	15.8
Each Bread Scale Hopper	7.50	15.8

The pound per hour limitations were calculated with the following equation:

Interpolation of the data in the table in 326 IAC 6-3-2(e)(2) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour, and
P = process weight rate in tons per hour

In order to comply with the allowable rate of emission, particulate from each of the dry ingredient storage and conveying emission units shall be controlled by a filter unit at all times that each of the dry ingredient storage and conveying emission units is in operation.

State Rule Applicability - Ovens, Boilers, and Heaters

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

(a) The natural gas-fired baking ovens and space heaters are each not subject to 326 IAC 6-2 as they are not sources of indirect heating.

(b) The natural gas-fired auxiliary boiler, process hot water heater, and domestic hot water heater, are subject to the requirements of 326 IAC 6-2-3, since each of the units are sources of indirect heating, were constructed after September 21, 1983, and are located

in Elkhart County. Pursuant to this rule, particulate matter emissions from the auxiliary boiler, process hot water heater, and domestic hot water heater shall be limited by the following equation:

$Pt = 1.09/Q^{0.26}$ where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and
Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

Pursuant to this rule, the total particulate emissions from the from the auxiliary boiler, process hot water heater, and domestic hot water heater shall not exceed 0.6 lb/MMBtu, based on a total source maximum operating capacity of 1.84 MMBtu/hr.

The auxiliary boiler, process hot water heater, and domestic hot water heater have a potential to emit particulate matter as follows:

PTE PM = (0.015 ton/yr PM)*(2000 lb/ton) / [(8760 hr/yr)*(1.84 MMBtu/hr)] = 0.002 lb/MMBtu PM

Therefore, the auxiliary boiler, process hot water heater, and domestic hot water heater are able to comply with this rule.

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

(a) Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired baking ovens and space heaters are each exempt from the requirements of 326 IAC 6-3, because they each have a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

(b) Pursuant to 326 IAC 6-3-1(b)(1), the auxiliary boiler, process hot water heater, and domestic hot water heater are each exempt from the requirements of 326 IAC 6-3, because they each are a source of indirect heating.

326 IAC 7-1 (Sulfur dioxide emission limitations: applicability)

Each of the ovens, boilers, and heaters are not subject to the requirements of 326 IAC 7-1, since each has potential and actual emissions at a rate of less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

Testing Requirements

In order to demonstrate compliance with the Best Available Control Technology (BACT) requirements for the baking ovens, the Permittee shall perform VOC (including emission rate and overall control efficiency of the catalytic oxidizer) testing for:

(a) the one (1) catalytic oxidizer, identified as 030, for the english muffin baking ovens 001 and 027, no later than 180 days after issuance of this permit, F-039-29392-00643. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

Note: this is a new requirement. This is a Title I change.

(b) the one (1) catalytic oxidizer, identified as 029, for the bread baking oven 028, at least once every five years from the date of the most recent valid compliance demonstration.

Note: This is an existing requirement. The last compliance demonstration was conducted August, 2007.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Catalytic Oxidizers 029 and 030	Temperature	Continuous	3 hr avg. > 600 °F	Response Steps
	Duct Pressure/ Fan Amperage	Daily	Normal - Abnormal	

These compliance determination requirements are necessary because the catalytic oxidizers must be installed and operated properly to ensure compliance with 326 IAC 8-1-6 (BACT), 326 IAC 2-8 (FESOP).

Each of the dry ingredient storage and conveying emission units has applicable compliance monitoring requirements as specified below:

Control	Parameter	Frequency	Range	Excursions and Exceedances
All filter units used in conjunction with each dry ingredient storage and conveying emission units.	Water Pressure Drop	Daily	1.0 to 5.0 inches	Response Steps

The existing requirement to take visible emissions notations have been removed because the emissions exhaust indoors. This is a Title I change.

These compliance monitoring requirements are necessary because each of the filter units must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 326 IAC 2-8-4 (FESOP), and 326 IAC 2-2 (PSD).

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal 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 application for the purposes of this review was received on June 24, 2010. Additional information was received on several dates, including: July 15, 2010; September 9, 2010; January 31, 2011; October 28, 2011; November 14, 2011; December 9, 2011; and January 10, 2012.

Conclusion

The operation of this commercial bakery shall be subject to the conditions of the attached FESOP Renewal No. F039-29392-00643.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Christine L. Filutze at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-8397 or toll free at 1-800-451-6027 extension 8-8397.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

SUMMARY OF EMISSIONS

Company Name: Allen Foods, Inc.
Address City IN Zip: 53075 Frederic Drive, Elkhart, IN 46514
Permit Number: F039-29392-00643
Plt ID: 039-00643
Reviewer: Christine Filutze / JRK
Date: January 12, 2012

Uncontrolled / Unlimited Emissions (Tons/Yr)

Pollutant	Muffin Line (001)			Muffin Line (027)			Bread Line (028)			Ingredient Storage and Conveying	Insignificant Nat. Gas Combustion	Paved Roadways (Fugitive)	Total
	Oven	Proof Box	Nat. Gas	Oven	Proof Box	Nat. Gas	Oven	Proof Box	Nat. Gas				
PM	-	-	0.02	-	-	0.02	-	-	0.08	295.21	0.23	4.10	295.57
PM10	-	-	0.09	-	-	0.08	-	-	0.34	103.42	0.90	0.82	104.83
PM2.5	-	-	0.09	-	-	0.08	-	-	0.34	103.42	0.90	0.20	104.83
VOC	66.59	6.66	0.07	66.59	6.66	0.06	141.90	14.19	0.24	-	0.65	-	303.62
NOx	-	-	1.25	-	-	1.05	-	-	4.42	-	11.90	-	18.61
SO2	-	-	0.01	-	-	0.01	-	-	0.03	-	0.07	-	0.11
CO	-	-	1.05	-	-	0.88	-	-	3.71	-	9.99	-	15.63
CO2e	-	-	1,507	-	-	1,269	-	-	5,330	-	14,362	-	22,469
Single HAP (Acetaldehyde)	2.00	0.20	-	2.00	0.20	-	0.17	0.02	-	-	-	-	4.58
Combined HAPs	2.00	0.20	0.02	2.00	0.20	0.02	0.17	0.02	0.08	-	0.22	-	4.93

Note:
Fugitive PM, PM10, PM2.5, and VOC are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Controlled / Unlimited Emissions (Tons/Yr)

Pollutant	Muffin Line (001)			Muffin Line (027)			Bread Line (028)			Ingredient Storage and Conveying	Insignificant Nat. Gas Combustion	Paved Roadways (Fugitive)	Total
	Oven	Proof Box	Nat. Gas	Oven	Proof Box	Nat. Gas	Oven	Proof Box	Nat. Gas				
PM	-	-	0.02	-	-	0.02	-	-	0.08	0.30	0.23	4.10	0.65
PM10	-	-	0.09	-	-	0.08	-	-	0.34	0.10	0.90	0.82	1.52
PM2.5	-	-	0.09	-	-	0.08	-	-	0.34	0.10	0.90	0.20	1.52
VOC	3.33	6.66	0.07	3.33	6.66	0.06	7.09	14.19	0.24	-	0.65	-	42.29
NOx	-	-	1.25	-	-	1.05	-	-	4.42	-	11.90	-	18.61
SO2	-	-	0.01	-	-	0.01	-	-	0.03	-	0.07	-	0.11
CO	-	-	1.05	-	-	0.88	-	-	3.71	-	9.99	-	15.63
CO2e	-	-	1,507	-	-	1,269	-	-	5,330	-	14,362	-	22,469
Single HAP (Acetaldehyde)	0.10	0.20	-	0.10	0.20	-	0.01	0.02	-	-	-	-	0.62
Combined HAPs	0.10	0.20	0.02	0.10	0.20	0.02	0.01	0.02	0.08	-	0.22	-	0.98

Note:
Fugitive PM, PM10, PM2.5, and VOC are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Limited Emissions (Tons/Yr)

Pollutant	Muffin Line (001) [A]			Muffin Line (027) [A]			Bread Line (028) [B]			Ingredient Storage and Conveying	Insignificant Nat. Gas Combustion	Paved Roadways (Fugitive)	Total
	Oven	Proof Box	Nat. Gas	Oven	Proof Box	Nat. Gas	Oven [B]	Proof Box	Nat. Gas				
PM	-	-	0.02	-	-	0.02	-	-	0.08	29.52	0.23	4.10	29.87
PM10	-	-	0.09	-	-	0.08	-	-	0.34	10.34	0.90	0.82	11.76
PM2.5	-	-	0.09	-	-	0.08	-	-	0.34	10.34	0.90	0.20	11.76
VOC	6.66	6.66	0.07	6.66	6.66	0.06	10.03	14.19	0.24	-	0.65	-	51.88
NOx	-	-	1.25	-	-	1.05	-	-	4.42	-	11.90	-	18.61
SO2	-	-	0.01	-	-	0.01	-	-	0.03	-	0.07	-	0.11
CO	-	-	1.05	-	-	0.88	-	-	3.71	-	9.99	-	15.63
CO2e	-	-	1,507	-	-	1,269	-	-	5,330	-	14,362	-	22,469
Single HAP (Acetaldehyde)	0.10	0.20	-	0.10	0.20	-	0.17	0.02	-	-	-	-	0.78
Combined HAPs	0.10	0.20	0.02	0.10	0.20	0.02	0.17	0.02	0.08	-	0.22	-	1.13

Note:
Fugitive PM, PM10, PM2.5, and VOC are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.
A- Combined VOC emissions from the Muffin Line (001) and Muffin Line (027) Ovens, exhausting through the common stack CAT-OX shall be limited to 1.52 bs/hr.
B- VOC emissions from the Bread Line Oven (028), exhausting through vent S17 shall not exceed 2.29 lbs/ton

Appendix A: Emissions Calculations
Muffin Line (001)
Oven Emissions

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Revision #: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

VOC and HAP Emissions from Bread Fermentation:

Maximum Production Rate: **2.10 tons/hr**

According to AP-42, Chapter 9.9.6 - Bread Baking, the VOC emission factor from the bread baking process can be estimated with the following equation:

E.F. = 0.95 Yi + 0.195 ti - 0.51S - 0.86ts + 1.90

Where

E.F. = 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

Maximum VOC emission factor 7.24 lbs/ton based on a stack test performed May 2007.
Therefore, the potential uncontrolled VOC emissions from bread baking =

2.10 x 7.24 lbs/ton x 8760 hrs/yr x 1 tons/2000 lbs = **66.59 tons/yr**

VOCs emitted during fermentation (leavening) assumed to be 97% ethanol and 3% acetaldehyde (VOC/HAP), based on the following document and supporting information:
1. "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992)
2. Henderson, D.C., 1977, "Commercial Bakeries as a Major Source of Reactive Volatile Organic Gases", U.S. EPA, Region XI Surveillance and Analysis Division

66.59 x 3% = **2.00 tons/yr**

BACT required catalytic oxidizer control efficiency = 95%
Therefore, the potential controlled VOC emisisons from bread baking =

66.59 tons/yr * (1 - control efficiency) = **3.33 tons/yr**

Potential controlled Acetaldehyde emissions from bread baking =

2.00 tons/yr * (1 - control efficiency) = **0.10 tons/yr**

VOC Emissions from Bread Line Proof Box:

Emission Unit ID	Emission Factor (% of Oven Emissions)	Uncontrolled Potential Oven Emissions VOC (tons/yr)	Uncontrolled Potential Oven Emissions Acetaldehyde (tons/yr)	Uncontrolled Potential Proof Box Emissions VOC (tons/yr)	Uncontrolled Potential Proof Box Emissions Acetaldehyde (tons/yr)
Muffin Line (001) Proof Box	10.00%	66.59	2.00	**6.66**	**0.20**

Note:
The assumption that emissions from the proof box are 10% of those from the bread baking oven was derived from the "Alternative Control Technology for Bakery Oven Emissions" released by the U.S. EPA in 1992. IDEM, OAQ has agreed to accept this method of calculating VOC potential emissions from the proof box.

Methodology:
Uncontrolled Potential Proof Box Emisisons (tons/yr) = Uncontrolled Potential Oven Emissions (tons/yr) * Emission Factor (% of Oven Emissions)
Uncontrolled Potential Acetaldehyde Emissions (ton/year) = Uncontrolled Potential VOC Emissions (ton/yr) * 3%

Appendix A: Emissions Calculations
Muffin Line (001)
Natural Gas Combustion

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Permit Number: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.85	24.97

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.09	0.09	0.01	1.25	0.07	1.05

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.621E-05	1.498E-05	9.362E-04	2.247E-02	4.244E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.242E-06	1.373E-05	1.748E-05	4.744E-06	2.621E-05

Combined HAPs: **0.02**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,498	0.03	0.03
Summed Potential Emissions in tons/yr	1,498		
CO2e Total in tons/yr	1,507		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Muffin Line (027)
Oven Emissions

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Revision #: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

VOC and HAP Emissions from Bread Fermentation:

Maximum Production Rate: **2.10 tons/hr**

According to AP-42, Chapter 9.9.6 - Bread Baking, the VOC emission factor from the bread baking process can be estimated with the following equation:

E.F. = 0.95 Yi + 0.195 ti - 0.51S - 0.86ts + 1.90

Where

E.F. = 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

Maximum VOC emission factor 7.24 lbs/ton based on a stack test performed May 2007 on Muffin Line 001.
Therefore, the potential uncontrolled VOC emissions from bread baking =

2.10 x 7.24 lbs/ton x 8760 hrs/yr x 1 tons/2000 lbs = **66.59 tons/yr**

VOCs emitted during fermentation (leavening) assumed to be 97% ethanol and 3% acetaldehyde (VOC/HAP), based on the following document and supporting information:
1. "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992)
2. Henderson, D.C., 1977, "Commercial Bakeries as a Major Source of Reactive Volatile Organic Gases", U.S. EPA, Region XI Surveillance and Analysis Division

66.59 x 3% = **2.00 tons/yr**

BACT required catalytic oxidizer control efficiency = 95%
Therefore, the potential controlled VOC emisisons from bread baking =

66.59 tons/yr * (1 - control efficiency) = **3.33 tons/yr**

Potential controlled Acetaldehyde emissions from bread baking =

2.00 tons/yr * (1 - control efficiency) = **0.10 tons/yr**

VOC Emissions from Bread Line Proof Box:

Emission Unit ID	Emission Factor (% of Oven Emissions)	Uncontrolled Potential Oven Emissions VOC (tons/yr)	Uncontrolled Potential Oven Emissions Acetaldehyde (tons/yr)	Uncontrolled Potential Proof Box Emissions VOC (tons/yr)	Uncontrolled Potential Proof Box Emissions Acetaldehyde (tons/yr)
Muffin Line (027) Proof Box	10.00%	66.59	2.00	**6.66**	**0.20**

Note:
The assumption that emissions from the proof box are 10% of those from the bread baking oven was derived from the "Alternative Control Technology for Bakery Oven Emissions" released by the U.S. EPA in 1992. IDEM, OAQ has agreed to accept this method of calculating VOC potential emissions from the proof box.

Methodology:
Uncontrolled Potential Proof Box Emisisons (tons/yr) = Uncontrolled Potential Oven Emissions (tons/yr) * Emission Factor (% of Oven Emissions)
Uncontrolled Potential Acetaldehyde Emissions (ton/year) = Uncontrolled Potential VOC Emissions (ton/yr) * 3%

Appendix A: Emissions Calculations
Muffin Line (027)
Natural Gas Combustion

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Permit Number: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
2.40	21.02

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.08	0.08	0.01	1.05	0.06	0.88

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.208E-05	1.261E-05	7.884E-04	1.892E-02	3.574E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.256E-06	1.156E-05	1.472E-05	3.995E-06	2.208E-05

Combined HAPs: **0.02**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	1,261	0.02	0.02
Summed Potential Emissions in tons/yr	1,261		
CO2e Total in tons/yr	1,269		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Bread Line (028)
Oven Emissions

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Revision #: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

VOC and HAP Emissions from Bread Fermentation:

Maximum Production Rate: **7.20 tons/hr**

According to AP-42, Chapter 9.9.6 - Bread Baking, the VOC emission factor from the bread baking process can be estimated with the following equation:

E.F. = 0.95 Yi + 0.195 ti - 0.51S - 0.86ts + 1.90

Where

E.F. = 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

Maximum VOC emission factor 4.4995 lbs/ton based on a stack test performed August 2007.
Therefore, the potential uncontrolled VOC emissions from bread baking =

7.20 x 4.995 lbs/ton x 8760 hrs/yr x 1 tons/2000 lbs = **141.90 tons/yr**

Maximum Acetaldehyde emission factor of 0.117% by weight of total VOC based on a stack test performed August 2007.
Therefore, the potential uncontrolled HAP (acetaldehyde) emissions from bread baking =

141.90 x 0.117% = **0.17 tons/yr**

BACT required catalytic oxidizer control efficiency = 95%
Therefore, the potential controlled VOC emisisons from bread baking =

141.90 tons/yr * (1 - control efficiency) = **7.09 tons/yr**

Potential controlled Acetaldehyde emissions from bread baking =

0.17 tons/yr * (1 - control efficiency) = **0.01 tons/yr**

VOC Emissions from Bread Line Proof Box:

Emission Unit ID	Emission Factor (% of Oven Emissions)	Uncontrolled Potential Oven Emissions VOC (tons/yr)	Uncontrolled Potential Oven Emissions Acetaldehyde (tons/yr)	Uncontrolled Potential Proof Box Emissions VOC (tons/yr)	Uncontrolled Potential Proof Box Emissions Acetaldehyde (tons/yr)
Bread Line (028) Proof Box	10.00%	141.90	0.17	**14.19**	**0.02**

Note:
The assumption that emissions from the proof box are 10% of those from the bread baking oven was derived from the "Alternative Control Technology for Bakery Oven Emissions" released by the U.S. EPA in 1992. IDEM, OAQ has agreed to accept this method of calculating VOC potential emissions from the proof box.

Methodology:
Uncontrolled Potential Proof Box Emisisons (tons/yr) = Uncontrolled Potential Oven Emissions (tons/yr) * Emission Factor (% of Oven Emissions)
Uncontrolled Potential Acetaldehyde Emissions (ton/year) = Uncontrolled Potential VOC Emissions (ton/yr) * 0.117%

Appendix A: Emissions Calculations
Bread Line (028)
Natural Gas Combustion

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Permit Number: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
10.08	88.30

	Pollutant					
Emission Factor in lb/MMCF	PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5
Potential Emission in tons/yr	0.08	0.34	0.34	0.03	4.42	0.24

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions	HAPs - Organics				
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	9.272E-05	5.298E-05	3.311E-03	7.947E-02	1.501E-04

	HAPs - Metals				
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.208E-05	4.857E-05	6.181E-05	1.678E-05	9.272E-05

Combined HAPs: **0.08**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions	Greenhouse Gas		
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	5,298	0.10	0.10
Summed Potential Emissions in tons/yr	5,298		
CO2e Total in tons/yr	5,330		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 PTE ton/yr x CO2 GWP (1) + CH4 PTE ton/yr x CH4 GWP (21) + N2O PTE ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Emissions from Dry Ingredient Storage and Conveying

Company Name: Allen Foods, Inc.
Address City IN Zip: 53075 Frederic Drive, Elkhart, IN 46514
Permit Number: F039-29392-00643
Plt ID: 039-00643
Reviewer: Christine Filutze / JRK
Date: January 12, 2012

The uncontrolled potential emissions of particulate from dry ingredient storage and conveying before controls are estimated using AP-42 Table 11.12-2 emission factors for the uncontrolled truck unloading of cement supplement to elevated storage silo (pneumatic)

Emission Factor (lbs/ton)*	
PM	PM10
3.14	1.10

Filter Unit Control Efficiency	
PM	PM10
99.9%	99.9%

Potential to Emit (PTE) of Particulate (PM and PM10)

Emission Unit	Maximum Ingredient Throughput (lbs/hr)**	Maximum Ingredient Throughput (tons/hr)**	Uncontrolled PTE of PM (lbs/hour)	Uncontrolled PTE of PM10 (lbs/hour)	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10=PM2.5* (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10=PM2.5* (tons/yr)	Limited Throughput (tons/yr)	Limited PTE of PM (lbs/ton)	Limited PTE of PM10=PM2.5* (lbs/ton)	Limited PTE of PM (tons/yr)	Limited PTE of PM10=PM2.5* (tons/yr)
7 Dry Ingredient Storage Silos (021, 022, 030, 031, 032, 033, and 034)	14310.0	7.16	22.47	7.87	98.40	34.47	9.8E-02	3.4E-02	62678	0.314	0.11	9.84	3.45
2 Dry Ingredient Use Bins (035 and 036) and 1 Dusting Flour Use Bin (037)	14310.0	7.16	22.47	7.87	98.40	34.47	9.8E-02	3.4E-02	62678	0.314	0.11	9.84	3.45
7 Scale Hoppers (038, 039, 040, 041, 042, 043, 044) and 2 Dusting Flour Hoppers (045 and 046)	14310.0	7.16	22.47	7.87	98.40	34.47	9.8E-02	3.4E-02	62678	0.314	0.11	9.84	3.45
Methodology				**Totals**	**295.2**	**103.4**	**0.295**	**0.103**				**29.52**	**10.34**

* Emission Factors from AP-42 Table 11.12-2 for uncontrolled truck unloading of cement supplement to elevated storage silo (pneumatic). Assume PM10=PM2.5.

**Maximum ingredient throughput of 14310 lbs/hr based on maximum batch production of bread using the 1 bread line and 2 muffin line. The maximum batch production rate of the 1 bread line is 160 loaves/min (7.2 tons of bread/hr) and the maximum batch production rate of each muffin line is 504 pieces/min (2.1 tons of muffins/hr)

Maximum Hourly Throughput (tons/hr) = [Maximum Hourly Throughput (lbs/hr)] / [2000 lbs/ton]

Uncontrolled PTE of PM or PM10 (lbs/hour) = [Maximum Hourly Throughput (tons/hr)] * [Emission Factor (lbs/ton)]

Uncontrolled PTE of PM or PM10 (tons/year) = [Uncontrolled PTE of PM or PM10 (lbs/hour)] * [8760 hours/year)] / [2000 lbs/ton]

Controlled PTE of PM or PM10 (tons/year) = [Uncontrolled PTE of PM or PM10 (tons/year)] *[1 - Control Efficiency]

Compliance with 326 IAC 6-3-2

Emission Unit Type	Maximum Batch Filling Rate (lbs/min)*	Maximum Batch Filling Rate (lbs/hr)	Maximum Batch Filling Rate (tons/hr)	326 IAC 6-3-2 Allowable PM Emission Rate (lbs/hr)
Dry Ingredient Storage Silo (each of 7 silos)	556.0	33360.0	16.68	27.0
Dry Ingredient Use Bin (each of 2 use bins)	325.0	19500.0	9.75	18.9
Dusting Flour Use Bin	325.0	19500.0	9.75	18.9
Muffin Scale Hopper (each of 4 Muffin Scale Hoppers)	250.0	15000.0	7.50	15.8
Bread Scale Hopper (each of 3 Bread Scale Hoppers)	250.0	15000.0	7.50	15.8

*Each dry ingredient storage silo has a maximum batch filling rate of 556 lbs/minute, based on truck unloading of 50,000 lb of flour over 90 minutes.

*Each use bin has a maximum batch filling rate of 325 lbs/minute.

*Each scale hopper has a maximum batch filling rate of 250 lbs/minute.

The use of the filter units will ensure compliance with each of the limits above.

Appendix A: Emissions Calculations
Insignificant Combustion Units

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Permit Number: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Emission Unit ID
1.00	8.76	Auxillary Boiler (002)
0.54	4.73	Process Heater (003)
0.30	2.63	Domestic Water Heater (004)
17.50	153.30	Space Heaters (005 through 009) @ 3.50 MMBtu/hr, each
1.32	11.56	Space Heaters (010 through 020) @ 0.12 MMBtu/hr, each
3.00	26.28	Catalytic Oxidizer (029)
3.50	30.66	Catalytic Oxidizer (030)
27.16	237.92	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.23	0.90	0.90	0.07	11.90	0.65	9.99

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology:
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutant Emissions

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.498E-04	1.428E-04	8.922E-03	2.141E-01	4.045E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.948E-05	1.309E-04	1.665E-04	4.521E-05	2.498E-04

Combined HAPs: **0.22**

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Greenhouse Gas Emissions

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	14,275	0.27	0.26
Summed Potential Emissions in tons/yr	14,276		
CO2e Total in tons/yr	14,362		

Methodology:
The N2O Emission Factor for uncontrolled is 2.2.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: **Allen Foods, Inc.**
Address City IN Zip: **53075 Frederic Drive, Elkhart, IN 46514**
Permit Number: **F039-29392-00643**
Plt ID: **039-00643**
Reviewer: **Christine Filutze / JRK**
Date: **January 12, 2012**

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Personal Car/Truck	60	2	120.0	1.0	120.0	10000	1.894	227.3	82954.5
Semitrailer Truck (ingredients in)	5	1	5.0	1.0	5.0	10000	1.894	9.5	3456.4
Semitrailer Truck (product out)	24	1	24.0	1.0	24.0	10000	1.894	45.5	16590.9
		Totals	**149.0**		**149.0**			**282.2**	**103001.9**

Average Vehicle Weight Per Trip = 1.0 tons/trip
Average Miles Per Trip = 1.89 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	1.0	1.0	1.0	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads (AP-42 Table 13.2.1-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.087	0.017	0.0043	lb/mile
Mitigated Emission Factor, Eext =	0.080	0.016	0.0039	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Personal Car/Truck	3.61	0.72	0.18	3.30	0.66	0.16
Semitrailer Truck (ingredients in)	0.15	0.03	0.01	0.14	0.03	0.01
Semitrailer Truck (product out)	0.72	0.14	0.04	0.66	0.13	0.03
Totals	**4.48**	**0.90**	**0.22**	**4.10**	**0.82**	**0.20**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particle Matter (<2.5 um) PTE = Potential to Emit

Indiana Department of Environmental Management
Office of Air Quality

Appendix B-1
Best Available Control Technology (BACT) Analysis Determination

Source Background and Description

Source Name:	Allen Foods, Inc.
Source Location:	53075 Frederic Drive, Elkhart, IN 46514
County:	Elkhart
SIC Code:	2051(Bread and Other Bakery Products, Except Cookies and Crackers)
Operation Permit No.:	F039-29392-00643
Permit Reviewer:	Jason R. Krawczyk

Background Information

On June 24, 2010, the Office of Air Quality (OAQ) received an application from Allen Foods, Inc., relating to the renewal of their Federally Enforceable State Operating Permit (FESOP) for their stationary commercial bakery. During the renewal process, the potential emission calculations for the source were revised to incorporate potential emissions from the Bread Line (028) proof box.

The following existing emission unit was constructed after January 1, 1980, has the potential to emit volatile organic compounds greater than twenty-five (25) tons per twelve (12) consecutive month period and is not regulated under any other rule in 326 IAC 8. Pursuant to the provisions of 326 IAC 8-1-6 Best Available Control Technology, an analysis for VOC was performed for this unit:

(a) One (1) bread line, identified as Line 028, constructed in 2006, with a maximum throughput capacity of 7.20 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired bakery oven, identified as emission unit 028, with a heat input capacity of 10.08 MMBtu per hour, with VOC emissions controlled by one (1) 3.0 MMBtu/hr natural gas-fired catalytic oxidizer identified as emission unit 029, exhausting through one (1) vent (S17); and

(2) One (1) proof box, identified as Line 028 Proof Box.

Note: The bread line is considered one facility for evaluation of 326 IAC 8-1-6.

IDEM, OAQ conducts BACT analyses in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

(1) Identify all potentially available control options;

(2) Eliminate technically infeasible control options;

(3) Rank remaining control technologies;

(4) Evaluate the most effective controls and document the results; and

(5) Select BACT.

Also in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts of the control options. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause adverse environmental effects to public health and the environment.

Existing VOC BACT Determination

(a) The VOC emissions from bread line oven 028 shall be controlled by a catalytic oxidizer.

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

(c) The VOC emissions from the bread line oven 028, exhausting through stack S30, shall not exceed 2.29 lbs/hr.

VOC BACT Re-evaluation

Step One: Identify All Potentially Available Control Technologies

Based on information reviewed for this BACT determination, the following potentially available control technologies were identified for controlling VOC emissions from Bread Line 028:

(a) Catalytic Oxidation

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, and as with the thermal oxidizers, fume preheating devices are commonly used to minimize operating costs. 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. Catalytic systems are usually limited to 1100-1300°F outlet temperatures, which limits VOC inputs to a maximum of 25% of Lower Explosive Limit (LEL). 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.

(1) Precious Metal Type (Platinum, Palladium, etc.)

Precious metals catalyst chambers are usually constructed of a ceramic or metallic substrate with the catalyst applied to the substrate. The catalyst assembly is stationary. These catalysts are highly efficient in a clean state but are subject to deactivation by several mechanisms. Sulfur, phosphorus, halogens, bismuth and heavy metals such as zinc, lead, arsenic, antimony, mercury, iron oxide, tin, and silicon can poison the catalyst bed in a non-reversible manner. A thorough understanding of the VOC constituents is necessary to apply this type of control device.

(2) Non-Precious Metal Type (Chromium, Manganese, etc.)

These systems are usually less susceptible to poisoning and deactivation, but require larger amounts of catalyst. These are usually in bulk form, applied to a ceramic substance and are arranged on a grid or screen. Catalyst beds are usually fixed relative to fume flow; however, there are fluidized bed types that negate the blinding by organic solids. The VOC constituents must be known to apply this control device.

(b) Thermal Oxidizer:

Thermal oxidation is the process of oxidizing organic contaminants in a waste gas stream by raising the temperature above the auto-ignition 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. 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.

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.

(1) Direct Flame:

A direct flame thermal oxidizer consists of only a combustion chamber with no heat recovery equipment.

(2) Recuperative Thermal Oxidizer:

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.

(3) Regenerative Thermal Oxidizer:

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.

(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) Bio-filtration:

Bio-filtration systems utilize living organisms to decompose vapor organic compounds. The bio-filtration system consists of large beds of organic material, such as wood chips, which are continually irrigated such that each piece of bed material is covered with a thin film of water. The organisms live in the film and use the organic contaminants as a food source. The rate of degradation of the VOC in the film layer is a function of each specific compound's critical concentration and the biological activity in the film, as well as diffusion of the VOC through the bed.

The rate of the biodegradation process as well as diffusion limitations make these systems best suited to very low concentration vent streams, particularly odorous gas streams. Control efficiencies are dependent upon bed temperatures, humidity, and VOC concentration to ensure continued growth of the microorganisms. A common problem with bio-filter control efficiency is partial or complete "death" of the bed that can occur should any of these parameters or a variation in the VOC content occur. Large flow rates require huge volumes of bed material, in some instances requiring the construction of entire buildings strictly to contain the necessary volume of bedding.

(e) Carbon Adsorption:

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.

(f) Condensation System:

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, causing a phase change from gas to liquid for the volatile constituents. The liquid is collected, and the concentration of the volatile constituent that was removed in the condensation step is reduced from the exhaust gas. A refrigeration condenser normally provides a VOC control efficiency greater than 90%. This technology is particularly applicable when concentration of VOCs in the gas stream is greater than one percent (1%).

Step Two: Eliminate Technically Infeasible Control Options

To be considered technically feasible, a control technology must either be successfully demonstrated on a unit or, if not demonstrated, then be "available and applicable". A technology is considered "available" if it can be obtained by the applicant through commercial channels. An available technology is considered "applicable" if it can reasonably be installed and operated on the unit in question.

The feasibility of each of the potentially applicable control options identified is evaluated below.

(a) Based on the information reviewed for this BACT determination, the use of carbon adsorption is infeasible because fats and oils in the bakery oven exhaust clog carbon pores. In addition, the ethanol is difficult to strip from the carbon.

(b) 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.

(c) Based on the information reviewed for this BACT determination, the use of a biofiltration system is infeasible because the high temperature exhaust stream from the baking oven would inhibit microbiological activities. The outlet temperature of the oven would exceed those in the required temperature range for mesophilic bacteria (nominally less than 106° F) and would kill off the microbes. Additionally, during the periods that the oven is shut-down for normal cleaning operations, the biofiltration system would have to be artificially fed in order to maintain system acclimation.

The following table summarizes other BACT determinations at similar sources or for similar processes that were identified in the EPA's RACT/BACT/LAER Clearinghouse (RBLC) under Process Type Code 70.550 (Bakeries and Snack Food), as well as IDEM, OAQ permits issued to date. The BACT determinations are arranged in descending order in terms of issuance date.

Note: Sources that took limits to render 326 IAC 8-1-6 not applicable are not included in this list.

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
White Castle Systems, Inc. Rensselaer, IN	2011	Bakery Oven/ Proof Box	Catalytic Oxidizer	VOC emission from the bread baking oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions from the bread oven shall not exceed 0.54 lbs/hr The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	Indiana Minor Source Operating Permit M073-29819-00039
Alpha Baking Co., Inc. LaPorte, IN	2011	Bakery Ovens Proof Boxes	Catalytic Oxidizer	VOC emission from the baking ovens shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. The source shall operate the proof boxes in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof boxes on tiered cleaning schedules in accordance with their Sanitation Standard Operating Procedures (SSOP).	Indiana Federally Enforceable State Operating Permit F091-28222-00135

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Harlan Bakeries, Inc. Avon, IN	2008	Bakery Oven	Catalytic Oxidizer	VOC emissions from the bagel oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 0.36 lbs/hr.	Indiana Minor Source Operating Permit M063-24103-00059
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2008	Bakery Oven (Bun Line BU4)	Catalytic Oxidizer	VOC emissions from the bun oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions from the bun oven shall not exceed 0.55 pounds per hour.	Indiana Federally Enforceable State Operating Permit Significant Permit Revision F097-123672-00161
Allen Foods, Inc. Elkhart, IN	2006	Bakery Oven	Catalytic Oxidizer	VOC emissions from the bread oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 2.29 lbs/hr.	Indiana Federally Enforceable State Operating Permit F039-22633-00643
Holsum of Fort Wayne, Inc. Fort Wayne, IN	2005	Bakery Oven	None	VOC emission shall be limited to 60 tons per twelve (12) consecutive month period	Indiana Part 70 Significant Source Modification SSM 091-27352-00106
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2003	Bakery Oven and Chain Lubricant (Bread Line BD1)	None	VOC emissions shall not exceed 49.0 tons per thirteen (13) consecutive twenty-eight (28) day period.	Indiana Federally Enforceable State Operating Permit Significant Permit Revision F097-16909-00161
Maple Leaf Bakery CA	1998	Bakery Oven	Catalytic Oxidizer	92 % Destruction Removal Efficiency Minimal 600°F Operating Temperature	RBLC ID: CA-0854 Permit No.: 0473-170
Freund Baking Company CA	1997	Bakery Oven	Catalytic Oxidizer	95.4 % Destruction Removal Efficiency	RBLC ID: CA-0859 Permit No.: 328570
Interstate Brands Corporation Indianapolis, IN	1997	Combined Bakery Ovens and Chain Lubricant	None	VOC emissions shall not exceed 95 tons per thirteen (13) consecutive twenty-eight (28) day period.	Indiana Federally Enforceable State Operating Permit F097-7413-00171
Holsum Bakery, Inc. AZ	1996	Bakery Oven	Quencher / Scrubber	81 % Control Efficiency 49.9 tons per year	RBLC ID: AZ-0029 Permit No.: 95-0432
KBI, Inc. Morristown, IN	1996	Dough Mixing, Fermentation, and Baking Area	None	VOC emissions shall not exceed a total of 99.9 tons per twelve (12) consecutive month period	Indiana Federally Enforceable State Operating Permit F145-15375-00037

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Certified Grocers of California, Ltd CA	1990	Bakery Oven	Catalytic Afterburner	95% Control Efficiency	RBLC ID: CA-0468 Permit Nos.: 228274, 219899
Automatic Rolls of Virginia, Inc. VA	1988	Bakery Oven	None	13.80 pounds per hour 23.00 tons per year	RBLC ID: VA-0110 Permit No.: (7)40761

Step Three: Rank Feasible Technologies

The remaining technically feasible options for controlling VOC emissions from the natural gas-fired bakery oven (028) 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%

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 Four: Evaluate Top Control Alternatives

Further evaluation including economic, energy and environmental impacts are required for controlling VOC emissions from the bread baking line. Annualized costs were determined in accordance with the EPA guidance (EPA's Office of Air Quality Planning and Standards Control Cost Manual), with other relevant information provided by the respective equipment vendors, inputs from plant personnel, and engineering judgment.

The source currently controls emissions from the Bread Line 028 oven with a catalytic oxidizer. In this BACT re-opening, the control of proof box emissions was evaluated.

Since the proof box does not have a stack or direct emission point to discharge to a control device, the source identified the following preliminary design ideas for the modifications necessary to the proof box entrances and exits for the collection of off gases:

1) Revolving Door on Proof Box Entrance:

A revolving door on the proof box entrance would require a modification to the entrance end conveyor. It would allow one pan to pass at a time and allow the proof box to maintain proper

heat and humidity conditions. It would minimize any heat loss from the proof box thereby also being energy efficient. Due to the nature of the materials going in and out the structure, it would need to be made from stainless steel. Stainless steel would simplify cleaning and minimize wear and tear between the metal pans and revolving door. The structure would in essence seal around each pan as it passes on the conveyor. It would be necessary for the revolving door to rotate with each pan and start and stop as the conveyor starts and stops. This would require a programmable logic controller (PLC) with sensor on the conveyor, to determine starts and stops. In order for the revolving door to not jam up materials on the conveyor, the system must be motorized and all movements synchronized.

2) Gas Collector on Proof Box Entrance:

The above mentioned revolving door would be designed to minimize air and gas loss from the proof box; however, some air and gas would still escape. The entire revolving door enclosure would be surrounded by a stainless steel hood. The hood would need to extend 5 to 8 feet beyond the entrance of the revolving door. The stainless steel hood would be maintained at a negative pressure in the hood, with positive pressure coming from the bakery and the differential pressure from within the proof box. The goal would be to take the majority of the air from the bakery and minimal air from the temperature and humidity controlled proof box. The fan would be a variable speed drive connected to differential pressure gauges on the proof box, exhaust hood and bakery. The sensors and the variable frequency drive would be connected to a programmable logic controller. This controller would communicate with the control panel for the proof box, which controls heat and humidity. As the proof box entrance exhaust fan speeds up, it would draw more air, and as a result may require the proof box to generate more heat and humidity. A feed-forward signal from the PLC would be required to maintain quality control of the product within the proof box.

3) Revolving Door on Proof Box Exit:

The revolving door on the proof box exit would be similar in form and function to the revolving door on the proof box entrance; however, there are additional design considerations due to the hot, moist products exiting through this door. The device would need to be constructed of stainless steel and additional consideration would need to given to condensation which could enter various motors, controls and measuring devices. As a means of controlling condensation, it would be necessary to have drip trays and moisture collection channels within the exit box. Additionally, there may be a need for insulation, to help control condensation. The insulation would have to be encased in materials suitable for the food handling industry. Since the product exiting the proof box is more delicate to handle, inadvertent jarring and banging of the grays could cause the product to lose some of the rise that occurred in the proof box. Therefore, many of the components in this box would have to have cautioning surfaces and spring loaded levers to gently push the product through the exit box.

4) Gas Collector on Proof Box Exit:

The gas collector on the proof box exit would be similar to the gas collector on the proof box entrance and would be necessary in order to minimize the amount of bakery air which passes through the exit box. Since the product would already have been proofed with a high temperature and high humidity air, drawing large amounts of bakery air, which is not at high temperature or high moisture, across this product, may also cause it to lose some of the rise which occurred in the proof box. To counteract the potential loss of rise, the collector would need to be extended to minimize the amount of air from the surrounding bakery, which would need to be drawn in to create a negative pressure.

Pursuant to Section IV.D.2.c of EPA's BACT Guidance Document, costs that are within the range of normal costs for a control method may be reviewed in comparison to similar sources. This comparison may allow for the elimination of a technologically- and otherwise economically-feasible control option,

provided that the costs of pollutant removal for the subject source are unduly high when compared to the costs borne by sources in recent BACT determinations.

The technologically-feasible options for controlling VOC emissions from the bakery line and the costs estimated for Allen Food, Inc. to purchase and operate the control devices is summarized in Appendix C. The cost effectiveness for modifying the proof box (Line 028 Proof Box), to capture and duct emissions to the existing catalytic oxidizer is not an economically cost-effective solution for the removal of VOC emissions. The high costs for controlling emissions from the Line 028 Proof Box are economically infeasible.

Bakery Line	Cost for Controlling VOCs from Entire Line (Proof Box* & Oven)	Cost for Controlling VOCs from Proof Box* Only	Cost for Controlling VOCs from Oven Only
	($ / Ton Removed)	($ / Ton Removed)	($ / Ton Removed)
Bread Line 028	$3,473	$26,519	$1,181

Note:
*Costs associated with controlling proof boxes are theoretical. These types of facilities have never been required to control VOC emissions.

(a) Cost Analysis for Controlling both the Proof Box and Oven:

The cost associated with controlling the combined 209.29 tons of VOC emitted from both the Line 028 bread oven and proof box has been determined to be $3,473 per ton of VOC removed.

(b) Cost Analysis for Controlling the Bakery Oven Only:

The cost associated with controlling the 190.26 tons of VOC emitted from Line 028 oven is $1,181 per ton of VOC removed.

(c) Cost Analysis for Controlling the Proof Box Only:

The additional cost associated with controlling the 19.03 tons of VOC emitted from the Line 028 proof box is $26,519 per ton of VOC removed, which is economically infeasible. This is equivalent to $504,544 per year to control emissions from the proof box.

IDEM, OAQ recognizes that the large incremental increase in controlling VOC emissions from the Bread Line 028 proof box would be excessive in costs. The cost associated with controlling one ton of VOC would increase from $1,181 per ton emitted from the Bread Line 028 oven to $26,519 for each ton emitted from the Bread Line 028 proof box. The environmental benefit from the reduction in the proof box emissions would be minimal compared to the cost associated with such a small reduction in VOC emissions.

The source proposes that requiring add-on controls to control VOC emissions from the proof box would place them at a significant economic disadvantage in the baking industry. The source proposes to continue to continue to comply with the existing BACT requirements, to operate the Line 028 proof box in accordance with the manufacturer's design and operating specifications, and to perform the appropriate cleaning operations of the Line 028 proof box to ensure proper operation and minimize potential emissions.

Step Five: Select BACT

IDEM has determined that the best available control technology (BACT) to control VOC emissions from the bread line oven (028) shall be as follows:

Bread Oven

(a) The VOC emissions from bread line oven 028 shall be controlled by a catalytic oxidizer.

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

(c) The VOC emissions from the bread line oven 028, exhausting through stack S30, shall not exceed 2.29 lbs/hr.

Proof Box

(a) The source shall operate bread line (Line 028) (consisting of the bakery oven and proof box) in accordance the manufacturer's design and operating specifications.

(b) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box associated with Line 028, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(1) Weekly Cleaning Procedure:

(A) Knock down all dough and residue from interior framework;
(B) Sweep floor;
(C) Use floor scraper for excess debris;
(D) Foam floor and scrub with brush; and
(E) Rinse Floor.

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

IDEM Contact

Questions regarding this BACT Analysis can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.

Indiana Department of Environmental Management
Office of Air Quality

Appendix B-2
Best Available Control Technology (BACT) Analysis Determination

Source Background and Description

Source Name:	Allen Foods, Inc.
Source Location:	53075 Frederic Drive, Elkhart, IN 46514
County:	Elkhart
SIC Code:	2051(Bread and Other Bakery Products, Except Cookies and Crackers)
Operation Permit No.:	F039-29392-00643
Permit Reviewer:	Jason R. Krawczyk

Background Information

On June 24, 2010, the Office of Air Quality (OAQ) received an application from Allen Foods, Inc., relating to the renewal of their Federally Enforceable State Operating Permit (FESOP) for their stationary commercial bakery. During the renewal process, the potential emission calculations for the source were revised to incorporate potential emissions from the proof boxes associated with Muffin Line 001 and Muffin Line 027. In addition, the stack test emission factor determined through the May 2007 stack test performed on Muffin Line 001 has been incorporated into the potential to emit calculations. This observed stack test emission factor identifies a potential to emit greater than twenty-five (25) tons per twelve (12) consecutive month period for each of the muffin lines.

The following existing emission units were constructed after January 1, 1980, each have the potential to emit volatile organic compounds greater than twenty-five (25) tons per twelve (12) consecutive month period and are not regulated under any other rule in 326 IAC 8. Pursuant to the provisions of 326 IAC 8-1-6 Best Available Control Technology, an analysis for VOC was performed for these units:

(a) One (1) english muffin line, identified as Line 001, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1) natural gas-fired baking oven, identified as emission unit 001, with a heat input capacity of 2.85 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30; and

(2) One (1) proof box, identified as Line 001 Proof Box.

Note: The muffin line (001) is considered one facility for evaluation of 326 IAC 8-1-6.

(b) One (1) english muffin line, identified as Line 027, constructed in 2006, with a maximum throughput capacity of 2.10 tons of dough per hour, consisting of:

(1) One (1), natural gas-fired baking oven, identified as emission unit 027, with a heat input capacity of 2.40 MMBtu per hour, with VOC emissions controlled by a catalytic oxidizer, identified as emission unit 030, and exhausting through common stack S30; and

(2) One (1) proof box, identified as Line 027 Proof Box.

Note: The muffin line (027) is considered one facility for evaluation of 326 IAC 8-1-6.

IDEM, OAQ conducts BACT analyses in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

(1) Identify all potentially available control options;

(2) Eliminate technically infeasible control options;

(3) Rank remaining control technologies;

(4) Evaluate the most effective controls and document the results; and

(5) Select BACT.

Also in accordance with the *"Top-Down" Best Available Control Technology Guidance Document* outlined in the 1990 draft U.S. EPA *New Source Review Workshop Manual*, BACT analyses take into account the energy, environmental, and economic impacts of the control options. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause adverse environmental effects to public health and the environment.

VOC BACT Analysis

Step One: Identify All Potentially Available Control Technologies

Based on information reviewed for this BACT determination, the following potentially available control technologies were identified for controlling VOC emissions from English Muffin Lines 001 and 027:

(a) Catalytic Oxidation

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, and as with the thermal oxidizers, fume preheating devices are commonly used to minimize operating costs. 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. Catalytic systems are usually limited to 1100-1300°F outlet temperatures, which limits VOC inputs to a maximum of 25% of Lower Explosive Limit (LEL). 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.

(1) Precious Metal Type (Platinum, Palladium, etc.)

Precious metals catalyst chambers are usually constructed of a ceramic or metallic substrate with the catalyst applied to the substrate. The catalyst assembly is stationary. These catalysts are highly efficient in a clean state but are subject to deactivation by several mechanisms. Sulfur, phosphorus, halogens, bismuth and heavy metals such as zinc, lead, arsenic, antimony, mercury, iron oxide, tin, and silicon can poison the catalyst

bed in a non-reversible manner. A thorough understanding of the VOC constituents is necessary to apply this type of control device.

(2) Non-Precious Metal Type (Chromium, Manganese, etc.)

These systems are usually less susceptible to poisoning and deactivation, but require larger amounts of catalyst. These are usually in bulk form, applied to a ceramic substance and are arranged on a grid or screen. Catalyst beds are usually fixed relative to fume flow; however, there are fluidized bed types that negate the blinding by organic solids. The VOC constituents must be known to apply this control device.

(b) Thermal Oxidizer:

Thermal oxidation is the process of oxidizing organic contaminants in a waste gas stream by raising the temperature above the auto-ignition 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. 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.

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.

(1) Direct Flame:

A direct flame thermal oxidizer consists of only a combustion chamber with no heat recovery equipment.

(2) Recuperative Thermal Oxidizer:

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.

(3) Regenerative Thermal Oxidizer:

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.

(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) Bio-filtration:

Bio-filtration systems utilize living organisms to decompose vapor organic compounds. The bio-filtration system consists of large beds of organic material, such as wood chips, which are continually irrigated such that each piece of bed material is covered with a thin film of water. The organisms live in the film and use the organic contaminants as a food source. The rate of degradation of the VOC in the film layer is a function of each specific compound's critical concentration and the biological activity in the film, as well as diffusion of the VOC through the bed.

The rate of the biodegradation process as well as diffusion limitations make these systems best suited to very low concentration vent streams, particularly odorous gas streams. Control efficiencies are dependent upon bed temperatures, humidity, and VOC concentration to ensure continued growth of the microorganisms. A common problem with bio-filter control efficiency is partial or complete "death" of the bed that can occur should any of these parameters or a variation in the VOC content occur. Large flow rates require huge volumes of bed material, in some instances requiring the construction of entire buildings strictly to contain the necessary volume of bedding.

(e) Carbon Adsorption:

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.

(f) Condensation System:

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, causing a phase change from gas to liquid for the volatile constituents. The liquid is collected, and the concentration of the volatile constituent that was removed in the condensation step is reduced from the exhaust gas. A refrigeration condenser normally provides a VOC control efficiency greater than 90%. This technology is particularly applicable when concentration of VOCs in the gas stream is greater than one percent (1%).

Step Two: Eliminate Technically Infeasible Control Options

To be considered technically feasible, a control technology must either be successfully demonstrated on a unit or, if not demonstrated, then be "available and applicable". A technology is considered "available" if it can be obtained by the applicant through commercial channels. An available technology is considered "applicable" if it can reasonably be installed and operated on the unit in question.

The feasibility of each of the potentially applicable control options identified is evaluated below.

(a) Based on the information reviewed for this BACT determination, the use of carbon adsorption is infeasible because fats and oils in the bakery oven exhaust clog carbon pores. In addition, the ethanol is difficult to strip from the carbon.

(b) 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.

(c) Based on the information reviewed for this BACT determination, the use of a biofiltration system is infeasible because the high temperature exhaust stream from the baking oven would inhibit microbiological activities. The outlet temperature of the oven would exceed those in the required temperature range for mesophilic bacteria (nominally less than 106° F) and would kill off the microbes. Additionally, during the periods that the oven is shut-down for normal cleaning operations, the biofiltration system would have to be artificially fed in order to maintain system acclimation.

The following table summarizes other BACT determinations at similar sources or for similar processes that were identified in the EPA's RACT/BACT/LAER Clearinghouse (RBLC) under Process Type Code 70.550 (Bakeries and Snack Food), as well as IDEM, OAQ permits issued to date. The BACT determinations are arranged in desceding order in terms of issuance date.

Note: Sources that took limits to render 326 IAC 8-1-6 not applicable are not included in this list.

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
White Castle Systems, Inc. Rensselaer, IN	2011	Bakery Oven/ Proof Box	Catalytic Oxidizer	VOC emission from the bread baking oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions from the bread oven shall not exceed 0.54 lbs/hr The source shall operate the proof box in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof box on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	Indiana Minor Source Operating Permit M073-29819-00039
Alpha Baking Co., Inc. LaPorte, IN	2011	Bakery Ovens Proof Boxes	Catalytic Oxidizer	VOC emission from the baking ovens shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. The source shall operate the proof boxes in accordance with manufacturer's and operating specifications. The source shall perform proof box cleaning operations for the proof boxes on tiered cleaning schedules in accordance with their Sanitation Standard Operating Procedures (SSOP).	Indiana Federally Enforceable State Operating Permit F091-28222-00135

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Harlan Bakeries, Inc. Avon, IN	2008	Bakery Oven	Catalytic Oxidizer	VOC emissions from the bagel oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 0.36 lbs/hr.	Indiana Minor Source Operating Permit M063-24103-00059
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2008	Bakery Oven (Bun Line BU4)	Catalytic Oxidizer	VOC emissions from the bun oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions from the bun oven shall not exceed 0.55 pounds per hour.	Indiana Federally Enforceable State Operating Permit Significant Permit Revision F097-123672-00161
Allen Foods, Inc. Elkhart, IN	2006	Bakery Oven	Catalytic Oxidizer	VOC emissions from the bread oven shall be controlled by a catalytic oxidizer. Overall VOC efficiency of the catalytic oxidizer shall be 95%, or the VOC outlet concentration shall not exceed 10 ppmv. VOC emissions shall not exceed 2.29 lbs/hr.	Indiana Federally Enforceable State Operating Permit F039-22633-00643
Holsum of Fort Wayne, Inc. Fort Wayne, IN	2005	Bakery Oven	None	VOC emission shall be limited to 60 tons per twelve (12) consecutive month period	Indiana Part 70 Significant Source Modification SSM 091-27352-00106
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2003	Bakery Oven and Chain Lubricant (Bread Line BD1)	None	VOC emissions shall not exceed 49.0 tons per thirteen (13) consecutive twenty-eight (28) day period.	Indiana Federally Enforceable State Operating Permit Significant Permit Revision F097-16909-00161
Maple Leaf Bakery CA	1998	Bakery Oven	Catalytic Oxidizer	92 % Destruction Removal Efficiency Minimal 600°F Operating Temperature	RBLC ID: CA-0854 Permit No.: 0473-170
Freund Baking Company CA	1997	Bakery Oven	Catalytic Oxidizer	95.4 % Destruction Removal Efficiency	RBLC ID: CA-0859 Permit No.: 328570
Interstate Brands Corporation Indianapolis, IN	1997	Combined Bakery Ovens and Chain Lubricant	None	VOC emissions shall not exceed 95 tons per thirteen (13) consecutive twenty-eight (28) day period.	Indiana Federally Enforceable State Operating Permit F097-7413-00171
Holsum Bakery, Inc. AZ	1996	Bakery Oven	Quencher / Scrubber	81 % Control Efficiency 49.9 tons per year	RBLC ID: AZ-0029 Permit No.: 95-0432
KBI, Inc. Morristown, IN	1996	Dough Mixing, Fermentation, and Baking Area	None	VOC emissions shall not exceed a total of 99.9 tons per twelve (12) consecutive month period	Indiana Federally Enforceable State Operating Permit F145-15375-00037

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Certified Grocers of California, Ltd CA	1990	Bakery Oven	Catalytic Afterburner	95% Control Efficiency	RBLC ID: CA-0468 Permit Nos.: 228274, 219899
Automatic Rolls of Virginia, Inc. VA	1988	Bakery Oven	None	13.80 pounds per hour 23.00 tons per year	RBLC ID: VA-0110 Permit No.: (7)40761

Step Three: Rank Feasible Technologies

The remaining technically feasible options for controlling VOC emissions from the natural gas-fired baking ovens (001 and 027) 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%

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 Four: Evaluate Top Control Alternatives

Further evaluation including economic, energy and environmental impacts are required for controlling VOC emissions from the bread baking line. Annualized costs were determined in accordance with the EPA guidance (EPA's Office of Air Quality Planning and Standards Control Cost Manual), with other relevant information provided by the respective equipment vendors, inputs from plant personnel, and engineering judgment.

(a) Thermal Oxidizer:

The costs associated with installing a thermal oxidizer were not evaluated since the cost of the technology is significantly higher than that of a catalytic oxidizer, which achieves the same level of control.

(b) Scrubber:

The costs associated with installing a wet packed bed scrubber were not evaluated since the cost associated with the increased water usage for the control device make the cost of operating the

control significantly higher than that of a catalytic oxidizer, which achieves the same level of control.

(c) Catalytic Oxidizer:

The source has agreed to install a catalytic oxidizer, to be identified as emission unit 030, for the control of the combined VOC emissions from the natural gas-fired baking ovens (001 and 027).

(d) Proof Box Modifications:

The costs associated with making any modifications to the proof boxes or installing any additional controls to control emissions from the proof boxes were not evaluated. During the BACT review for Bread Line 028, it was determined to be economically infeasible to modify an existing proof box to control VOC emissions (See Appendix B-1). The potential to emit from the Bread Line 028 proof box is greater than the combined potentials to emit from the English Muffin Line 001 and 027 proof boxes. The costs associated with modifying the English Muffin Line 001 and English Muffin Line 027 proof boxes would presumably be double the cost than that which was determined for modifying the single Bread Line 028 proof box. Therefore, the costs associated with the control of the English Muffin Line 001 and English Muffin Line 027 proof boxes are assumed to be economically infeasible.

Pursuant to Section IV.D.2.c of EPA's BACT Guidance Document, costs that are within the range of normal costs for a control method may be reviewed in comparison to similar sources. This comparison may allow for the elimination of a technologically- and otherwise economically-feasible control option, provided that the costs of pollutant removal for the subject source are unduly high when compared to the costs borne by sources in recent BACT determinations.

The source proposes that requiring add-on controls for the proof boxes would place them at a significant economic disadvantage in the baking industry. The source proposes to install a single catalytic oxidizer to control emissions from the english muffin line ovens (001 and 027), to operate the proof boxes associated with each line in accordance with the manufacturer design and operating specifications, and to perform the appropriate cleaning operations of the Line 001 and Line 027 proof boxes to ensure proper operation and minimize potential emissions.

Step Five: Select BACT

IDEM has determined that the best available control technology (BACT) to control VOC emissions from the english muffin lines (001 and 027) shall be as follows:

Baking Ovens

(a) The VOC emissions from english muffin oven 001 and english muffin oven 027 shall be controlled by a catalytic oxidizer.

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

(c) The combined VOC emissions from the english muffin oven 001 and english muffin oven 027, exhausting through the common stack S30, shall not exceed 1.52 lbs/hr.

Proof Boxes

(a) The source shall operate Line 001 (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(b) The source shall operate Line 027 (consisting of the baking oven and proof box) in accordance the manufacturer's design and operating specifications.

(c) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box associated with Line 001, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(1) Weekly Cleaning Procedure:

(A) Knock down all dough and residue from interior framework;
(B) Sweep floor;
(C) Use floor scraper for excess debris;
(D) Foam floor and scrub with brush;
(E) Rinse Floor;

(d) In order to ensure proper operation and to minimize potential emissions, the source shall perform proof box cleaning operations for the proof box associated with Line 027, on a weekly cleaning schedule and perform at a minimum, the following operations, or their equivalent, in accordance with their Sanitation Standard Operating Procedure:

(1) Weekly Cleaning Procedure:

(A) Knock down all dough and residue from interior framework;
(B) Sweep floor;
(C) Use floor scraper for excess debris;
(D) Foam floor and scrub with brush;
(E) Rinse Floor;

Compliance with the above limits and conditions will satisfy the requirements of 326 IAC 8-1-6 (BACT).

IDEM Contact

Questions regarding this BACT Analysis can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.

Appendix C: Cost Analysis for Control Devices
Controlling the Bread Baking Line 028

Company Name: Allen Foods, Inc.
Address City IN Zip: 53075 Frederic Drive, Elkhart, IN 46514
Permit Number: 039-29392-00643
Plt ID: 039-00643
Reviewer: Jason R. Krawczyk
Date: January 23, 2012

Catalytic Oxidizer and/or Clean Room / Air Handlers			Units Controlled		
			Proof Box & Oven***	Proof Box Only**	Oven Only*
DIRECT COST (Pollution Control Equipment)		**Unit Cost**	**TOTAL ($)**	**TOTAL ($)**	**TOTAL ($)**
Direct Purchased Equipment					
	Equipment Total (A)	A =	$1,106,960	$500,000	$606,960
	Instrumentation	0.10 A	-	-	-
	Sales Taxes	0.08 A	$40,000	$40,000	-
	Freight	0.05 A	$0	-	-
Total Equipment Costs (B)		**B =**	**$1,146,960**	**$540,000**	**$606,960**
Direct Installation Cost					
	Foundation and Support (Engineering Estimate)		$0	-	-
	Auxiliaries - Ductwork / Fittings (CSM Worldwide)		$118,000	$118,000	-
	Handling and Erection (Contractor Estimate)		$0	-	-
	Piping (Engineering Estimate)		$0	-	-
	Insulation and Painting		$0	-	-
	Electrical (Engineering Estimate)		$0	-	-
	Site Preparation		$0	-	-
	Other		$0	-	-
Total Direct Installation Costs			**$118,000**	**$118,000**	**-**
TOTAL Direct Investment (TDI) = (Total Equipment Cost + Total Direct Installation Cost)		**TDI =**	**$1,264,960**	**$658,000**	**$606,960**
Indirect Installation Costs					
	Engineering and Supervision (Engineering Estimate)		$53,456	$50,000	$3,456
	Lost Production (for retrofit situation)		$0	-	-
	Construction and Field Expenses		$0	-	-
	Contractor Fees		$0	-	-
	Start-up and Performance Tests (Source Specific Estimate)		$28,200	$12,000	$16,200
	Overall Contingencies (Engineering Estimate)	0.2 TDI	$256,923	$131,600	$125,323
	Working Capital		$0	-	-
Total Indirect Installation Costs (TIC)		**TIC =**	**$338,579**	**$193,600**	**$144,979**
TOTAL CAPITAL INVESTMENT (TCI) = (TDI +TIC)		**TCI =**	**$1,603,539**	**$851,600**	**$751,939**
ANNUAL OPERATION & MAINTENANCE					
Direct Operating Costs (DA)					
	Operating Labor		$16,790	$10,494	$6,296
	Maintenance Labor		$16,790	$10,494	$6,296
	Maintenance Parts & Labor (Engineering Estimate)		$14,600	$9,125	$5,475
	Gas & Electric (Equipment Ratings)		$354,430	$297,840	$56,590
	Replacement Parts		$19,122	$11,500	$7,622
Total Direct Operating Costs (DA)		**DA =**	**$421,732**	**$339,453**	**$82,279**
Indirect Operating Costs (IC)					
	Overhead (Engineering Estimate)		$28,909	$18,068	$10,841
	Insurance & Administrative Costs		$65,329	$35,252	$30,077
	Capital Recovery Cost (Assumes 5.5% interest over 10 years)		$210,805	$111,771	$101,532
Total Indirect Operating Costs (IA)		**IA =**	**$94,238**	**$53,320**	**$40,918**
	Heat Recovery Credits		$0	$0	$0
Total Operating Costs (DA + IA - Heat Recovery Credits)		**TOC =**	**$515,970**	**$392,773**	**$123,197**
Total Annualized Cost (Capital Recovery Cost + TOC)		**TAC =**	**$726,775**	**$504,544**	**$224,729**
Tons VOC Removed @ 95.0% =			209.29	19.03	190.26
Cost per Ton VOC Removed (TAC / Tons VOC Removed) =			**$3,473**	**$26,519**	**$1,181**

* Costs for the oven only were supplied during the initial BACT analysis performed for New Source Review and FESOP F039-22633-00643

**Costs for the proof box were supplied during the BACT analysis performed for this FESOP Renewal F039-29392-00643.

***Costs for the proof box & oven are combined costs of controlling each part of the process individually.

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Wayne Jones
Allen Foods, Inc
53075 Frederic Dr
Elkhart, IN 46514

DATE: March 30, 2012

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

SUBJECT: Final Decision
FESOP
039-29392-00643

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Kara Humes (Entech)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

March 30, 2012

TO: Elkhart Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Allen Foods, Inc.
Permit Number: 039-29392-00643

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	CDENNY 3/30/2012 Allen Foods, Inc 039-29392-00643 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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1		Wayne Jones Allen Foods, Inc 53075 Frederic Dr Elkhart IN 46514 (Source CAATS)									
2		Merrit Dilts Plant Manager Allen Foods, Inc 53075 Frederic Dr Elkhart IN 46514 *(RO CAATS)*									
3		Elkhart City Council and Mayors Office 229 South Second Street Elkhart IN 46516 *(Local Official)*									
4		Elkhart Public Library 300 S 2nd St Elkhart IN 46516-3184 *(Library)*									
5		Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 *(Health Department)*									
6		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 *(Affected Party)*									
7		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 *(Local Official)*									
8		Ms. Kara J. Humes Entech Engineering, Inc. 500 North Centre Street Pottsville PA 17901 *(Consultant)*									
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