Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Significant Revision to a
Minor Source Operating Permit (MSOP)
for White Castle System, Inc. in Jasper County

Significant Permit Revision No.: 073-37592-00039

The Indiana Department of Environmental Management (IDEM) has received an application from White Castle System, Inc., located at 809 North Melville St., Rensselaer, Indiana 47978, for a significant revision of its MSOP issued on June 7, 2016. If approved by IDEM's Office of Air Quality (OAQ), this proposed revision would allow White Castle System, Inc. to make certain changes at its existing source. White Castle System, Inc. has applied to increase their 326 IAC 8-1-6 BACT emissions limit, to allow for the variability in the generation of VOCs during the baking process and to assure compliance on a continual basis.

This draft MSOP significant permit revision does not contain any new equipment that would emit air pollutants; however, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

A copy of the permit application and IDEM's preliminary findings are available at:

Jasper County Public Library
208 West Susan Street
Rennselaer, IN 47947

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

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number SPR 073-37592-00039 in all correspondence.

Comments should be sent to:

Tamera Wessel
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 4-8530
Or dial directly: (317) 234-8530
Fax: (317) 232-6749 attn: Tamera Wessel
E-mail: twessel@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Tamera Wessel of my staff at the above address.

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

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Michael R. Pence
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Carol S. Comer
Commissioner

DRAFT

Mr. Jeffrey Miller
White Castle System, Inc.
555 West Goodale Street
Columbus, OH 43215

Re: 073-37592-00039
Significant Revision to
M073-36946-00039

Dear Mr. Miller:

White Castle System, Inc. was issued a Minor Source Operating Permit (MSOP) Renewal No. M073-36946-00039 on June 7, 2016 for a stationary bread baking operation located at 809 North Melville St., Rensselaer, Indiana 47978. On September 2, 2016, the Office of Air Quality (OAQ) received an application from the source requesting to increase their 326 IAC 8-1-6 BACT emissions limit, to allow for the variability in the generation of VOCs during the baking process and to assure compliance on a continual basis. Pursuant to the provisions of 326 IAC 2-6.1-6, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-6.1-6(i). Pursuant to the provisions of 326 IAC 2-6.1-6, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-6.1-6, this permit shall be revised by incorporating the significant permit revision into the permit.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire MSOP as revised.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Tamera Wessel of my staff at 317-234-8530 or 1-800-451-6027, and ask for extension 4-8530.

Sincerely,

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

Attachments: Revised Permit and Technical Support Document

JK/tw
cc: File - Jasper County
Jasper County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch

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Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY

DRAFT

White Castle System, Inc.
809 North Melville St.
Rensselaer, Indiana 47978

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

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

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

Operation Permit No.: M073-36946-00039	
Issued by: *Original Signed by:* Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 7, 2016 Expiration Date: June 7, 2026

Significant Permit Revision No.: 073-37592-00039	
Issued by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: June 7, 2026

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary bread baking operation.

Source Address:	809 North Melville St., Rensselaer, Indiana 47978
General Source Phone Number:	219-866-4631
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
County Location:	Jasper
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) bread baking line, consisting of a proof box and a natural gas-fired bread baking oven, identified as P001, with a maximum heat input capacity of 3.1 MMBtu/hr, and a maximum baking rate of 3,400 pounds of bread per hour, constructed in 1984, and venting to stack #1. The natural gas-fired bread baking oven is equipped with a catalytic oxidizer for VOC control, approved for construction in 2011.

(b) One (1) natural gas-fired boiler, identified as B001, with a maximum heat input capacity of 2.0 million British thermal units per hour (MMBtu/hr), constructed in 2007, and venting to stack #2;

(c) Three (3) flour storage silos each with a capacity of 110,000 pounds, with a pneumatic conveying system with a fabric filter on each silo. These silos were constructed in 1984;

(d) Flour handling system, which includes two (2) weigh feeders and two (2) flour mixers, with a total capacity of 2,200 pounds per hour, each emission unit is controlled by a dedicated filter fabric.

(e) One (1) natural gas-fired production air handler unit, identified as H001, with a maximum heat input capacity of 1.98 MMBtu/hour.

(f) One (1) natural gas-fired boiler room air handler, identified as H002, with a maximum heat input capacity of 0.30 MMBtu/hour.

(g) One (1) natural gas-fired boiler room water heater, identified as H003, with a maximum heat input capacity of 0.30 MMBtu/hour.

(h) One (1) natural gas-fired boiler unit heater, identified as H004, with a maximum heat input capacity of 0.05 MMBtu/hour.

(i) One (1) natural gas-fired office roof top unit, identified as H005, with a maximum heat input capacity of 0.20 MMBtu/hour.

(j) One (1) natural gas-fired dock north heater, identified as H006, with a maximum heat input capacity of 0.13 MMBtu/hour.

(k) One (1) natural gas-fired mixer area north heater, identified as H007, with a maximum heat input capacity of 0.13 MMBtu/hour.

(l) One (1) natural gas-fired dock south heater, identified as H008, with a maximum heat input capacity of 0.13 MMBtu/hour.

(m) One (1) natural gas-fired production bailer unit, identified as H009, with a maximum heat input capacity of 0.13 MMBtu/hour.

(n) One (1) natural gas-fired northwest production unit heater, identified as H010, with a maximum heat input capacity of 0.13 MMBtu/hour.

(o) One (1) natural gas-fired southwest production unit heater, identified as H011, with a maximum heat input capacity of 0.13 MMBtu/hour.

(p) One (1) natural gas-fired east B-Room heater unit, identified as H012, with a maximum heat input capacity of 0.13 MMBtu/hour.

(q) One (1) natural gas-fired west B-Room heater unit, identified as H013, with a maximum heat input capacity of 0.13 MMBtu/hour.

(r) One (1) natural gas-fired mezzanine heater unit, identified as H014, with a maximum heat input capacity of 0.05 MMBtu/hour.

(s) One (1) natural gas-fired A-Room heater unit, identified as H015, with a maximum heat input capacity of 0.05 MMBtu/hour.

(t) One (1) natural gas-fired dock middle heater, identified as H016, with a maximum heat input capacity of 0.13 MMBtu/hour.

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, M073-36946-00039, 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

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

B.5 Severability

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

B.6 Property Rights or Exclusive Privilege

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

B.7 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. 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 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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

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

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

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

B.9 Preventive Maintenance Plan [326 IAC 1-6-3]

(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 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.

(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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M073-36946-00039 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.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete 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 one hundred twenty (120) days prior to the date of the expiration of this permit; and

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

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

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

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

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

B.15 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

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

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

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

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

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

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

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

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

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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

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

B.18 Credible Evidence [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Violation of any conditions of this permit.

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

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

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

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

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (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 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.

(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. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

(a) 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.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

Corrective Actions and Response Steps

C.12 Response to Excursions or Exceedances

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.13 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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.

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

C.14 Malfunctions Report [326 IAC 1-6-2]

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

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

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

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

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

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

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

(b) Unless otherwise specified in this permit, 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.16 General Reporting Requirements [326 IAC 2-1.1-11][326 IAC 2-6.1-2][IC 13-14-1-13]

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

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

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or

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

(c) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) bread baking line, consisting of a proof box and a natural gas-fired bread baking oven, identified as P001, with a maximum heat input capacity of 3.1 MMBtu/hr, and a maximum baking rate of 3,400 pounds of bread per hour, constructed in 1984, and venting to stack #1. The natural gas-fired bread baking oven is equipped with a catalytic oxidizer for VOC control, approved for construction in 2011.

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

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

D.1.1 Best Available Control Technology (BACT) - VOC [326 IAC 8-1-6]

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

(a) The VOC emissions from the natural gas-fired bread baking oven (P001) shall be controlled by a catalytic oxidizer.

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

(c) The VOC emissions from the natural gas-fired bread baking oven (P001) shall not exceed 1.03 pounds per hour.

(d) The source shall operate the proof box associated with the bread baking line in accordance the manufacturer's design and operating specifications.

(e) 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 1, on a tiered 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) Scrape, sweep, and remove dough/product from floor inside proof box.

(2) Four (4) Week Cleaning Procedure:

(A) Wipe off interior proof box channel rails where needed;
(B) Remove any dough or oil accumulations from channel rails and cross over framework; and
(C) Wash or mop the floor of the proof box. Remove accumulated waste from floor.

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

A Preventive Maintenance Plan is required for the catalytic oxidizer controlling the natural gas-fired bread baking oven (P001). Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

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

D.1.3 VOC Control

In order to assure compliance with Conditions D.1.1(a), (b) and (c), the catalytic oxidizer shall be in operation and control emissions from the natural gas-fired bread baking oven (P001) at all times products are baking in the oven.

D.1.4 Testing Requirements [326 IAC 8-1-6][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1(b) and D.1.1(c), the Permittee shall perform VOC testing (including emission rate and overall destruction efficiency) for the catalytic oxidizer associated with the natural gas-fired bread baking oven (P001) utilizing methods as approved by the Commissioner, not later than five (5) years from the date of the most recent compliance demonstration.

Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing - contains the Permittee's obligation with regard to the performance testing required by this condition.

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

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 than once per fifteen (15) minutes. The output of this system shall be recorded as a three (3) hour average.

(b) The Permittee shall determine the three (3) hour average temperature from the most recent valid stack test that demonstrates compliance with Conditions D.1.1(b) and D.1.1(c).

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

(d) If the 3-hour average temperature falls below the above mentioned 3-hr average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.6 Catalytic Oxidizer Duct Pressure or Fan Amperage

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the latest valid stack test that demonstrates compliance with the limits in Condition D.1.1.

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

(c) When, for any one reading, the duct pressure or fan amperage is outside the above mentioned range, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 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.

(d) The instruments used for determining the pressure drop 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.

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

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.5, the Permittee shall maintain 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. The Permittee shall include in its daily record when a temperature record is not taken and the reason for the lack of a temperature record (e.g., the process did not operate that day).

(b) To document the compliance status with Condition D.1.6, the Permittee shall maintain daily records of the duct pressure or fan amperage and the duct pressure or fan amperage used to demonstrate compliance during the most recent compliant stack test. The Permittee shall include in its daily record when a duct pressure or fan amperage record is not taken and the reason for the lack of duct pressure or fan amperage record (e.g., the process did not operate that day).

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) One (1) natural gas-fired boiler, identified as B001, with a maximum heat input capacity of 2.0 million British thermal units per hour (MMBtu/hr), constructed in 2007, and venting to stack #2;

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

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

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

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions from the one (1) natural gas-fired boiler, identified as B001, shall not exceed 0.60 lb/MMBtu.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(c) Three (3) flour storage silos each with a capacity of 110,000 pounds, with a pneumatic conveying system with a fabric filter on each silo. These silos were constructed in 1984;

(d) Flour handling system, which includes two (2) weigh feeders and two (2) flour mixers, with a total capacity of 2,200 pounds per hour, each emission unit is controlled by a dedicated filter fabric.

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

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

D.3.1 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from each of following operations shall not exceed the pound per hour limit listed in the table below:

Emission Unit	Process Weight Rate (tons/hour)	326 IAC 6-3-2 Allowable Particulate Emission Rate (pounds/hour)
Three (3) flour storage silos	1.04	4.21
Two (2) weigh feeders	1.10	4.37
Two (2) flour mixers	1.10	4.37

Interpolation of the data for the process weight rate 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.3.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

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

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

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

Company Name:	White Castle System, Inc.
Address:	809 North Melville St.
City:	Rensselaer, Indiana 47978
Phone #:	219-866-4631
MSOP #:	M073-36946-00039

I hereby certify that White Castle System, Inc. is :
□ still in operation.
□ no longer in operation.

I hereby certify that White Castle System, Inc. is :
□ in compliance with the requirements of MSOP M073-36946-00039.
□ not in compliance with the requirements of MSOP M073-36946-00039.

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

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

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

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

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

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

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

_____
_____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Minor Source Operating Permit (MSOP) Renewal

Source Description and Location

Source Name:	White Castle System, Inc.
Source Location:	809 North Melville St., Rensselaer, IN 47978
County:	Jasper
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
Operation Permit No.:	M073-36946-00039
Operation Permit Issuance Date:	June 7, 2016
Significant Permit Revision No.:	073-37592-00039
Permit Reviewer:	Tamera Wessel

On September 2, 2016, the Office of Air Quality (OAQ) received an application from White Castle System, Inc. related to a modification to an existing stationary bread baking operation.

Existing Approvals

The source was issued MSOP Renewal No. M073-36946-00039 on June 7, 2016. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Jasper County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(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. Jasper 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) $PM_{2.5}$
Jasper County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Jasper County has been classified as attainment or unclassifiable in Indiana for all other crteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

(a) The fugitive emissions of regulated pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

(b) 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.

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Status of the Existing Source

The table below summarizes the uncontrolled/unlimited potential to emit of the entire source, prior to the proposed revision:

This PTE table is from Appendix A of of this TSD.

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP
Baking Oven	0.00	0.00	0.00	0.00	0.00	90.62	0.00	2.72	2.72 (acetaldehyde)
Proof Box	0.00	0.00	0.00	0.00	0.00	9.06	0.00	0.27	0.27 (acetaldehyde)
Natural Gas Combustion	0.08	0.34	0.34	0.03	4.45	0.24	3.74	0.08	0.08 (hexane)
Flour Handling***	0.13	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Roads (Fugitive)	0.60	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	**0.81**	**0.53**	**0.44**	**0.03**	**4.45**	**99.92**	**3.74**	**3.07**	**2.99 (acetaldehyde)**
MSOP Threshold	25	25	25	25	25	25	-	-	-
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
***The fabric filters controlling particulate emissions from the flour handling are considered integral to the process. Therefore, the potential PM/PM10/PM2.5 emissions from flour handling are considered after controls for the purpose of permit level determination.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by White Castle System, Inc. on September 2, 2016, relating to a request to re-evaluate their Best Available Control Technology (BACT) Requirements in accordance with 326 IAC 8-1-6. Stack tests performed on the Bread Baking Oven, identified as P001, revealed VOC emissions were released at a rate greater than predicted by the USEPA recommended equation given in "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992) for estimating VOC emissions from yeast-raised bread baking point sources. The source has requested to increase their VOC emissions BACT limit to allow for the variability in the generation of VOCs during the baking process and to assure compliance on a continual basis.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – MSOP Revision

There are no increases to the potential to emit for the source due to this revision. The purpose of this revision is to adjust emission limits pursuant to 326 IAC 8-1-6.

Pursuant to 326 IAC 2-6.1-6(i)(1)(C), this MSOP is revised through a Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit Revision and the proposed revision is subject to 326 IAC 8-1-6.

PTE of the Entire Source After Issuance of the MSOP Revision

The table below summarizes the potential to emit of the entire source, reflecting the VOC BACT limit, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source After Revision of BACT limit (tons/year)								
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP
Baking Oven	0.00	0.00	0.00	0.00	0.00	~~2.37~~[a] **4.53**	0.00	2.72	2.72 (acetaldehyde)
Proof Box	0.00	0.00	0.00	0.00	0.00	9.06	0.00	0.27	0.27 (acetaldehyde)
Natural Gas Combustion	0.08	0.34	0.34	0.03	4.45	0.24	3.74	0.08	0.08 (hexane)
Flour Handling***	0.13	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Roads (Fugitive)	0.60	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	0.81	0.53	0.44	0.03	4.45	~~11.67~~[a] **13.84**[a]	3.74	3.07	2.99 (acetaldehyde)
MSOP Threshold	25	25	25	25	25	25	-	-	-
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
***The fabric filters controlling particulate emissions from the flour handling are considered integral to the process. Therefore, the potential PM/PM10/PM2.5 emissions from flour handling are considered after controls for the purpose of permit level determination.
[a] - Value represents the BACT limited VOC emissions. All other values are uncontrolled/unlimited potential to emit.

The table below summarizes the potential to emit of the entire source after issuance of this revision and after consideration of the VOC BACT limit. The table below was generated from the above table, with bold text un-bolded and strikethrough text deleted.

Process/ Emission Unit	Potential To Emit of the Entire Source After Revision of BACT limit (tons/year)								
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP
Baking Oven	0.00	0.00	0.00	0.00	0.00	4.53[a]	0.00	2.72	2.72 (acetaldehyde)
Proof Box	0.00	0.00	0.00	0.00	0.00	9.06	0.00	0.27	0.27 (acetaldehyde)
Natural Gas Combustion	0.08	0.34	0.34	0.03	4.45	0.24	3.74	0.08	0.08 (hexane)
Flour Handling***	0.13	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
Roads (Fugitive)	0.60	0.12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	0.81	0.53	0.44	0.03	4.45	13.84[a]	3.74	3.07	2.99 (acetaldehyde)
MSOP Threshold	25	25	25	25	25	25	-	-	-
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
***The fabric filters controlling particulate emissions from the flour handling are considered integral to the process. Therefore, the potential PM/PM10/PM2.5 emissions from flour handling are considered after controls for the purpose of permit level determination.
[a] - Value represents the BACT limited VOC emissions. All other values are uncontrolled/unlimited potential to emit.

MSOP Status

(1) Criteria Pollutants
This revision to an existing Title V minor stationary source will not change the minor status, because the uncontrolled/unlimited potential to emit criteria pollutants from the entire source will still be less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-6.1 (MSOP).

(2) HAPs
This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Permit Level Determination – PSD

(a) PSD Minor Source – PM
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the uncontrolled/unlimited potential to emit PM from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(b) PSD Minor Source – Other Regulated Pollutants
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the uncontrolled/unlimited potential to emit of all PSD regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(1) There are no New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(1) There are no new National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63), 326 IAC 14 and 326 IAC 20 included for this proposed revision.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Permit Level Determination – MSOP section above.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the baking line is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.

See PTE of the Entire Source After Issuance of the MSOP Revision Section above.

Bread Baking Line

326 IAC (VOC Rules: General Reduction Requirements for New Facilities)
The bread baking line, P001, has potential VOC emissions of 25 tons or more per year and is not otherwise regulated by other Article 8 rule, 326 IAC 20-48, or 326 IAC 20-56. Therefore this unit is subject to 326 IAC 8-1-6. Due to the various contributing factors in determining the potential to emit VOC in the baking process when using the USEPA recommended equation given in "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992), actual emissions can fluctuate greatly from the calculated potential to emit. At the request of the source, IDEM has reevaluated the Best Available Control Requirements (BACT) in accordance with 326 IAC 8-1-6, to allow for the variability in the generation of VOCs during the baking process and to assure the source is capable of demonstrating compliance on a continual basis.

Pursuant to 326 IAC 8-1-6:

(a) The VOC emissions from the natural gas-fired bread baking oven (P001) shall be controlled by a catalytic oxidizer.

(b) The overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet

concentration shall not exceed 10 ppmv.

(c) The VOC emissions from the natural gas-fired bread baking oven (P001) shall not exceed 1.034 pounds per hour.

(d) The source shall operate the proof box associated with the bread baking line in accordance the manufacturer's design and operating specifications.

(e) 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 1, on a tiered 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) Scrape, sweep, and remove dough/product from floor inside proof box.

(2) Four (4) Week Cleaning Procedure:

(A) Wipe off interior proof box channel rails where needed;
(B) Remove any dough or oil accumulations from channel rails and cross over framework; and
(C) Wash or mop the floor of the proof box. Remove accumulated waste from floor.

See Appendix B for the detailed BACT determination.

Compliance Determination, Monitoring and Testing Requirements

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in MSOP Renewal No: M073-37592-00039, issued on June 7, 2016.

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) Condition D.1.1(c) has been updated with the revised VOC emissions limit.

D.1.1 Best Available Control Technology (BACT) - VOC [326 IAC 8-1-6]

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

(a) The VOC emissions from the natural gas-fired bread baking oven (P001) shall be controlled by a catalytic oxidizer.

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

(c) The VOC emissions from the natural gas-fired bread baking oven (P001) shall not exceed ~~0.54~~**1.034** pounds per hour.

...

Conclusion and Recommendation

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 September 2, 2016.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed MSOP Significant Permit Revision No. 073-37592-00039. The staff recommends to the Commissioner that this MSOP Significant Permit Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Tamera Wessel 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) 234-8530 or toll free at 1-800-451-6027 extension 4-8530.

(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 Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emission Calculations
Summary

Company Name: White Castle System, Inc.
Address City IN Zip: 809 North Melville Street, Rensselaer, IN 47978
Permit Number: 073-37592-00039
Reviewer: Tamera Wessel
Date: 9/2/2016

Uncontrolled/Unlimited Potential to Emit										
Emission Units	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**		**Total HAPs**
Baking Oven	0.00	0.00	0.00	0.00	0.00	90.62	0.00	2.72	acetaldehyde	2.72
Proof Box	0.00	0.00	0.00	0.00	0.00	9.06	0.00	0.27	acetaldehyde	0.27
Natural Gas Combustion	0.08	0.34	0.34	0.03	4.45	0.24	3.74	0.078	hexane	0.08
Flour Handling*	0.13	0.07	0.07	0.00	0.00	0.00	0.00	0.00	-	0.00
Roads	0.60	0.12	0.03	0.00	0.00	0.00	0.00	0.00	-	0.00
Total	**0.81**	**0.53**	**0.44**	**0.03**	**4.45**	**99.92**	**3.74**	**2.99**	**acetaldehyde**	**3.07**

*The fabric filters controlling particulate emissions from the flour handling are considered integral to the process. Therefore, the potential PM/PM10/PM2.5 emissions from flour handling are considered after controls for the purpose of permit level determination.

Controlled Potential to Emit										
Emission Units	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**		**Total HAPs**
Baking Oven**	0.00	0.00	0.00	0.00	0.00	4.53	0.00	0.27	acetaldehyde	0.27
Proof Box	0.00	0.00	0.00	0.00	0.00	9.06	0.00	0.27	acetaldehyde	0.27
Natural Gas Combustion	0.08	0.34	0.34	0.03	4.45	0.24	3.74	0.08	hexane	0.08
Flour Handling*	0.13	0.07	0.07	0.00	0.00	0.00	0.00	0.00	-	0.00
Roads	0.60	0.12	0.03	0.00	0.00	0.00	0.00	0.00	-	0.00
Total	**0.81**	**0.53**	**0.44**	**0.03**	**4.45**	**13.84**	**3.74**	**0.54**	**acetaldehyde**	**0.63**

*The fabric filters controlling particulate emissions from the flour handling are considered integral to the process. Therefore, the potential PM/PM10/PM2.5 emissions from flour handling are considered after controls for the purpose of permit level determination.

**Pursuant to 326 IAC 8-1-6, the VOC emissions from the bread baking oven (P001) shall be controlled by a catalytic oxidizer and the overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv.

Limited Potential to Emit										
Emission Units	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**Single HAP**		**Total HAPs**
Baking Oven**	0.00	0.00	0.00	0.00	0.00	4.53	0.00	2.72	acetaldehyde	2.72
Proof Box	0.00	0.00	0.00	0.00	0.00	9.06	0.00	0.27	acetaldehyde	0.27
Natural Gas Combustion	0.08	0.34	0.34	0.03	4.45	0.24	3.74	0.08	hexane	0.08
Flour Handling*	0.13	0.07	0.07	0.00	0.00	0.00	0.00	0.00	-	0.00
Roads	0.60	0.12	0.03	0.00	0.00	0.00	0.00	0.00	-	0.00
Total	**0.81**	**0.53**	**0.44**	**0.03**	**4.45**	**13.84**	**3.74**	**2.99**	**acetaldehyde**	**3.07**

*The fabric filters controlling particulate emissions from the flour handling are considered integral to the process. Therefore, the potential PM/PM10/PM2.5 emissions from flour handling are considered after controls for the purpose of permit level determination.

**Pursuant to 326 IAC 8-1-6, the VOC emissions from the bread baking oven (P001) shall be controlled by a catalytic oxidizer and the overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv.

**VOC from the baking oven is limited to 1.034 lbs/hr pursuant to 326 IAC 8-1-6.

Appendix A: Emissions Calculations
VOC from Bread Baking Line

Company Name: White Castle System, Inc.
Address City IN Zip: 809 North Melville Street, Rensselaer, IN 47978
Permit Number: 073-37592-00039
Reviewer: Tamera Wessel
Date: 9/2/2016

VOC Emission Factor (lbs VOC/tons bread baked) = 12.17

This emission factor is based off the stack testing performed on February 22, 2012, with a slight safety factor added to account for yeast percent fluctuations. The average VOC emission rate during testing was 18.90 lb/hr while producing 3271 lbs/hr (11.556 lb/ton).

Uncontrolled Potential Emissions - Bread Baking Oven

Emission Unit	Post-baking Batch size (lbs)	Batches per hour	Emission Factor (lbs/ton bread baked)	Uncontrolled Potential VOC Emissions (lbs/hr)	Uncontrolled Potential VOC Emissions (tons/year)	Control Efficiency (%)*	Controlled Potential VOC Emissions (lbs/hr)	Controlled Potential VOC Emissions (tons/year)
Bread Baking Oven	850	4	12.17	20.69	90.62	95.00%	1.034	4.53

Proof Box emissions = 10% of Bread Baking Oven Emissions**

Uncontrolled Potential Bread Baking Oven VOC Emissions (tons/year)	Percentage	Uncontrolled Potential VOC Emissions from Proof Box (tons/year)
90.62	10.00%	9.06

Total Uncontrolled Potential VOC from Bread Baking Line =	**99.68**
Total Controlled Potential VOC from Bread Baking Line =	**13.59**

Methodology

Uncontrolled Potential VOC Emissions for Bread Baking Oven (lbs/hr) = Batch size (lbs) * Batches/hr * Emission Factor (lbs/ton) * 1 ton/2000 lbs
Uncontrolled Potential VOC Emissions for Bread Baking Oven (tons/year = Uncontrolled Potential VOC Emissions (lbs/hr) * 8760 hours/year * 1 ton/2000 lbs
Controlled Potential VOC Emissions for Bread Baking Oven (lbs/hr) = Uncontrolled Potential VOC emissions (lbs/hr) * (1 - Control Efficiency (%))
Controlled Potential VOC Emissions for Bread Baking Oven (tons/year) = Uncontrolled Potential VOC emissions (tons/year) * (1 - Control Efficiency (%))
Uncontrolled Potential VOC Emissions from Proof Box (tons/year) = Uncontrolled Potential Bread Baking Oven VOC Emissions (tons/year) * 10%
*A control efficiency of a minimum of 95% VOC for the catalytic oxidizer is required by the permit.

**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.

Appendix A: Emissions Calculations
Acetaldehyde from Bread Baking Line

Company Name: White Castle System, Inc.
Address City IN Zip: 809 North Melville Street, Rensselaer, IN 47978
Permit Number: 073-37592-00039
Reviewer: Tamera Wessel
Date: 9/2/2016

Emission Unit	Uncontrolled Potential VOC Emissions (tons/year)	Percentage of VOC that is acetaldehyde*	Uncontrolled Potential Acetaldehyde Emissions (tons/year)	Controlled Potential Acetaldehyde Emissions (tons/year)
Bread Baking Oven	90.62	3%	2.72	0.27
Proof Box	9.06	3%	0.27	0.27
		Total	**2.99**	**0.54**

Methodology

Uncontrolled Potential Acetaldehyde Emissions (tons/year) = Uncontrolled Potential VOC Emissions (tons/year) * 3% acetaldehyde
Controlled Potential Acetaldehyde Emissions (tons/year) = Uncontrolled Potential Acetaldehyde Emissions (tons/yr) * (1 - 0.9)

*VOC emitted during fermentation (leavening) is assumed to be 97% ethanol and 3% acetaldehyde (VOC/HAP), based on the following documents 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

The assumed control efficiency for Acetaldehyde from the Catalytic Oxidizer is 90%.

Appendix A: Emissions Calculations
Particulate Emissions from Flour Handling

Company Name: White Castle System, Inc.
Address City IN Zip: 809 North Melville Street, Rensselaer, IN 47978
Permit Number: 073-37592-00039
Reviewer: Tamera Wessel
Date: 9/2/2016

Emissions Unit	Maximum Throughput Rate (lbs/hr)	Maximum Throughput Rate (tons/hr)	Uncontrolled PM Emission Factor (lb/ton)	Uncontrolled PM10/PM2.5 Emission Factor (lb/ton)	Uncontrolled Potential PM Emissions (lb/hour)	Uncontrolled Potential PM10/PM2.5 Emissions (lbs/hour)	Potential PM Emissions Prior to Integral Controls (tons/yr)	PM10/PM2.5 Emissions Prior to Consideration of Integral Controls(tons/yr)	Controlled PM Emission Factor (lb/ton)	Controlled PM10/PM2.5 Emission Factor (lb/ton)	Potential PM Emissions After Consideration of Integral Controls (tons/yr)	PM10/PM2.5 Emissions After Consideration of Integral Controls (tons/yr)
Three (3) Flour Storage Silos	2083.33	1.04	3.14	1.10	3.27	1.15	14.33	5.02	0.0089	0.0049	0.04	0.02
Two (2) Weigh Feeders	2200	1.10	3.14	1.10	3.45	1.21	15.13	5.30	0.0089	0.0049	0.04	0.02
Two (2) Flour Mixers	2200	1.10	3.14	1.10	3.45	1.21	15.13	5.30	0.0089	0.0049	0.04	0.02
Total							**44.58**	**15.62**			**0.13**	**0.07**

Note:
Emission factors are from AP-42, Table 11.12-2 for Cement Supplement Unloading to Elevated Storage Silo (Pneumatic), 3-05-011-17, June 2006.

Methodology:
Maximum Throughput Rate for 3 Flour Storage Silos (lbs/hr) = 100 batches/day * 500 lbs/batch * 1 day/24 hours
Maximum Throughput Rate for 2 Weigh Feeders (lbs/hr) = Maximum capacity of 3,640 lbs/hour * 2 Weigh feeders
Maximum Throughput Rate for 2 Flour Mixers (lbs/hr) = Maximum capacity of 3,640 lbs/hour * 2 Flour mixers
Maximum Throughput Rate (tons/hr) = Maximum Throughput Rate (lbs/hr) * 1 ton/2000 lbs
Potential PM Emissions (tons/yr) = Maximum Throughput Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr * 1 ton/2000 lbs
Potential PM10/PM2.5 Emissions (tons/yr) = Maximum Throughput Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: White Castle System, Inc.
Address City IN Zip: 809 North Melville Street, Rensselaer, IN 47978
Permit Number: 073-37592-00039
Reviewer: Tamera Wessel
Date: 9/2/2016

		Pollutant	PM*	PM10*	PM2.5*	SO2	NOx**	VOC	CO
		Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100	5.5	84.0
	Heat Input Capacity	Potential Throughput	Potential Emission tons/yr						
Emission Unit	MMBtu/hr	MMCF/yr	PM*	PM10*	PM2.5*	SO2	NOx**	VOC	CO
Production Air Handler H001	1.98	17.36	0.016	0.066	0.066	0.005	0.868	0.048	0.729
Boiler Room Air Handler H002	0.30	2.59	0.002	0.010	0.010	0.001	0.129	0.007	0.109
Boiler Room Water Heater H003	0.30	2.63	0.002	0.010	0.010	0.001	0.131	0.007	0.110
Boiler Unit Unit Heater H004	0.05	0.39	0.000	0.001	0.001	0.000	0.020	0.001	0.017
Office Roof Top Unit H005	0.20	1.75	0.002	0.007	0.007	0.001	0.088	0.005	0.074
Dock North Heater H006	0.13	1.14	0.001	0.004	0.004	0.000	0.057	0.003	0.048
Mixer Area North Heater H007	0.13	1.14	0.001	0.004	0.004	0.000	0.057	0.003	0.048
Dock South Heater H008	0.13	1.10	0.001	0.004	0.004	0.000	0.055	0.003	0.046
Production Bailer Unit H009	0.13	1.10	0.001	0.004	0.004	0.000	0.055	0.003	0.046
Northwest Production Unit Heater H010	0.13	1.10	0.001	0.004	0.004	0.000	0.055	0.003	0.046
Southwest Production Unit Heater H011	0.13	1.10	0.001	0.004	0.004	0.000	0.055	0.003	0.046
East B-Room Heater Unit H012	0.13	1.10	0.001	0.004	0.004	0.000	0.055	0.003	0.046
West B-Room Heater Unit H013	0.13	1.10	0.001	0.004	0.004	0.000	0.055	0.003	0.046
Mezzanine Heater Unit H014	0.05	0.39	0.000	0.001	0.001	0.000	0.020	0.001	0.017
A-Room Heater Unit H015	0.05	0.39	0.000	0.001	0.001	0.000	0.020	0.001	0.017
Dock Middle Heater H016	0.13	1.14	0.001	0.004	0.004	0.000	0.057	0.003	0.048
Boiler B001	2.00	17.52	0.017	0.067	0.067	0.005	0.876	0.048	0.736
Oven P001	3.10	27.16	0.026	0.103	0.103	0.008	1.358	0.075	1.141
Catalytic Oxidizer	1.00	8.76	0.008	0.033	0.033	0.003	0.438	0.024	0.368
Totals	**10.15**		**0.08**	**0.34**	**0.34**	**0.03**	**4.45**	**0.24**	**3.74**

Pollutant	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
	Potential Emission tons/yr									
Emission Unit	Benzene	DCB	Formaldehyde	Hexane	Toluene	Pb	Cd	Cr	Mn	Ni
Production Air Handler H001	1.8E-05	1.0E-05	6.5E-04	0.016	3.0E-05	4.3E-06	9.5E-06	1.2E-05	3.3E-06	1.8E-05
Boiler Room Air Handler H002	1.8E-06	1.1E-06	6.6E-05	0.002	3.0E-06	4.4E-07	9.6E-07	1.2E-06	3.3E-07	1.8E-06
Boiler Room Water Heater H003	1.2E-06	6.8E-07	4.3E-05	0.001	1.9E-06	2.8E-07	6.3E-07	8.0E-07	2.2E-07	1.2E-06
Boiler Unit Unit Heater H004	1.2E-06	6.8E-07	4.3E-05	0.001	1.9E-06	2.8E-07	6.3E-07	8.0E-07	2.2E-07	1.2E-06
Office Roof Top Unit H005	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Dock North Heater H006	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Mixer Area North Heater H007	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Dock South Heater H008	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Production Bailer Unit H009	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Northwest Production Unit Heater H010	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Southwest Production Unit Heater H011	4.1E-07	2.4E-07	1.5E-05	0.000	6.7E-07	9.9E-08	2.2E-07	2.8E-07	7.5E-08	4.1E-07
East B-Room Heater Unit H012	4.1E-07	2.4E-07	1.5E-05	0.000	6.7E-07	9.9E-08	2.2E-07	2.8E-07	7.5E-08	4.1E-07
West B-Room Heater Unit H013	1.2E-06	6.8E-07	4.3E-05	0.001	1.9E-06	2.8E-07	6.3E-07	8.0E-07	2.2E-07	1.2E-06
Mezzanine Heater Unit H014	1.8E-05	1.1E-05	6.6E-04	0.016	3.0E-05	4.4E-06	9.6E-06	1.2E-05	3.3E-06	1.8E-05
A-Room Heater Unit H015	2.9E-05	1.6E-05	1.0E-03	0.024	4.6E-05	6.8E-06	1.5E-05	1.9E-05	5.2E-06	2.9E-05
Dock Middle Heater H016	9.2E-06	5.3E-06	3.3E-04	0.008	1.5E-05	2.2E-06	4.8E-06	6.1E-06	1.7E-06	9.2E-06
Boiler B001	1.2E-06	6.8E-07	4.3E-05	0.001	1.9E-06	2.8E-07	6.3E-07	8.0E-07	2.2E-07	1.2E-06
Oven P001	1.2E-06	6.8E-07	4.3E-05	0.001	1.9E-06	2.8E-07	6.3E-07	8.0E-07	2.2E-07	1.2E-06
Catalytic Oxidizer	1.1E-06	6.6E-07	4.1E-05	0.001	1.9E-06	2.7E-07	6.0E-07	7.7E-07	2.1E-07	1.1E-06
Totals	**9.1E-05**	**5.2E-05**	**3.3E-03**	**0.078**	**1.5E-04**	**2.2E-05**	**4.8E-05**	**6.1E-05**	**1.6E-05**	**9.1E-05**
Worst Single HAP	7.8E-02	Hexane								
Total HAPs	8.2E-02									

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined. PM2.5 assumed equal to PM10.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Methodology
Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) * 8,760 hrs/yr * 1 MMCF/1,000 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) / 2,000 lb/ton
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 (SUPPLEMENT D 3/98)
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
DCB = Dichlorobenzene
Pb = Lead
Cd = Cadmium
Cr = Chromium
Mn = Manganese
Ni = Nickel

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: White Castle System, Inc.
Source Address: 809 North Melville Street, Rensselaer, IN 47978
Permit Number: 073-37592-00039
Reviewer: Tamera Wessel
Date: 9/2/2016

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)
Shipment In	5.0	1.0	5.0	25.0	125.0	1190	0.225	1.1	411.3
Shipment Out	6.0	1.0	6.0	14.0	84.0	820	0.155	0.9	340.1
		Totals	**11.0**		**209.0**			**2.1**	**751.4**

Average Vehicle Weight Per Trip = 19.0 tons/trip
Average Miles Per Trip = 0.19 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
W =	19.0	19.0	19.0
sL =	9.7	9.7	9.7

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 =	1.753	0.351	0.0860	lb/mile
Mitigated Emission Factor, Eext =	1.603	0.321	0.0787	lb/mile
Dust Control Efficiency =	0%	0%	0%	

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)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Shipment In	0.36	0.07	0.02	0.33	0.07	0.02	0.33	0.07	0.02
Shipment Out	0.30	0.06	0.01	0.27	0.05	0.01	0.27	0.05	0.01
Totals	0.66	0.13	0.03	**0.60**	**0.12**	**0.03**	0.60	0.12	0.03

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
Best Available Control Technology (BACT) Analysis Determination

Source Background and Description

Source Name:	White Castle System, Inc.
Source Location:	809 North Melville Street, Rensselaer, IN 47978
County:	Jasper
SIC Code:	2051 (Bread and Other Bakery Products, Except Cookies and Crackers)
Significant Permit Revision No.:	073-37592-00039
Operation Permit No.:	M073-36946-00039
Permit Reviewer:	Tamera Wessel

Background Information

On September 2, 2016, the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) received an application from White Castle System, Inc. concerning a request to re-evaluate their BACT VOC emissions limit due to compliance testing results which revealed higher than expected VOC emissions as predicted from the USEPA recommended equation given in "Alternative Control Technology Document for Bakery Oven Emissions" (EPA 453/R-92-017, December 1992). Without an increase to their existing allowable VOC emissions limit, White Castle System, Inc. predicts they will not be able to comply with their BACT requirements on a consistent and continual basis.

The following existing emission units 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, 326 IAC 20-48, or 326 IAC 20-56. 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) baking line, consisting of a proof box and a natural gas-fired bread baking oven, identified as P001, with a maximum heat input capacity of 3.1 MMBtu/hr, and a maximum baking rate of 3,300 pounds of bread per hour, constructed in 1984, and venting to stack #1. The natural gas-fired bread baking oven is equipped with a catalytic oxidizer for VOC control, approved for construction in 2011.

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

The following potentially available control technologies were identified for controlling VOC emissions from the baking line:

(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 ovens would inhibit microbiological activities. The outlet temperature of the ovens 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.

Step Three: Rank Feasible Technologies

The remaining technically feasible options for controlling VOC emissions from the natural gas-fired bread baking oven (P001) 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

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.

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
White Castle Systems, Inc. **Rensselaer, IN**	**Proposed 2016**	**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 1.034 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).**	**Proposed Indiana Minor Source Operating Permit Significant Permit Revision** **073-37592-00039**

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Kerry, Incorporated Evansville, IN	Proposed 2016	JBC-1 Line Dielectric Oven JBC-2 Line Dielectric Oven	None	VOC emissions from the JBC dielectric oven, identified as JBC Dielectric Oven, shall not exceed 49.0 tons per twelve (12) consecutive month period. The source shall perform oven cleaning operations on a tiered cleaning schedule in accordance with their SSOP. VOC emissions from the JBC-2 dielectric oven, identified as JBC-2 Dielectric Oven-2, shall not exceed 49.0 tons per twelve (12) consecutive month period. The source shall perform oven cleaning operations on a tiered cleaning schedule in accordance with their SSOP.	Proposed Indiana Federally Enforceable State Operating Permit Significant Permit Revision SPR163-36389-00129
Perfection Bakeries, Inc. Lowell, IN	2016	Bread Baking Line	None	VOC emissions from the bread baking line EU01, including the natural gas-fired oven EU02 and proof box EU03, shall not exceed 70.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. The source shall operate the proof box EU03 in accordance with the manufacturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box EU3 on a weekly cleaning schedule in accordance with the Sanitation Standard Operating Procedure (SSOP).	RBLC ID: IN-0250 Indiana Minor Source Operating Permit M089-37029-00590
KBI, Inc. Morristown, IN	2015	Bun Line	None	VOC emissions from the bun production line, consisting of a natural gas-fired oven and proof box, shall not exceed 109.8 tons per twelve (12) consecutive month period. The source shall operate the proof box in accordance with the manufacturer's design 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).	RBLC ID: IN-0237 Indiana Part 70 Significant Source Modification SSM 145-35383-00037

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Holsum of Fort Wayne, Inc. Fort Wayne, IN	2015	Bread Production Line	None	VOC emissions from the bread production line, consisting of the natural gas-fired oven, identified as BD2, and the proof box, identified as BDP, shall not exceed 70.0 tons per twelve (12) consecutive month period. The source shall operate the proof box (BDP) in accordance with the manufacturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box (BDP) on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedure (SSOP).	RBLC ID: IN-0216 Indiana Part 70 Significant Source Modification SSM 091-33988-00106
Harlan Bakeries Avon, IN	2015	Bagel Baking Line BKL2	Catalytic Oxidizer	The VOC emissions from OVEN-0002 shall be controlled by a catalytic oxidizer (OXIDIZER-0001). The overall VOC control efficiency for the catalytic oxidizer (including the capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv. The VOC emissions from the catalytic oxidizer (OXIDIZER-0001) stack exhaust (S-1) shall not exceed 0.36 pounds per hour. The source shall perform proof box cleaning operation for PROOFER-0002 and PROOFER-0010 in accordance with the manufacturer's design and operating specifications. The source shall perform cleaning operations on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedure (SSOP).	RBLC ID: IN-0214 Indiana Federally Enforceable State Operating Permit Renewal F063-33421-00059

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
New Horizons Baking Company Fremont, IN	2013	Muffin Line B Muffin Line H	None	VOC emissions from the muffin line, identified as Line B (consisting of the muffin griddle (Unit B) and the proof box (Line B Proof Box)), shall not exceed 35.16 tons per twelve (12) consecutive month period. The source shall operate Line B (consisting of the muffin griddle (Unit B) and proof box (Line B Proof Box)) in accordance the manufacturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box (Line B Proof Box) on a weekly cleaning schedule in accordance with their Sanitation Standard Operating Procedure (SSOP). VOC emissions from the muffin line, identified as Line H (consisting of the muffin griddle (Unit H) and the proof box (Line H Proof Box)), shall not exceed 31.65 tons per twelve (12) consecutive month period. The source shall operate Line H (consisting of the muffin griddle (Unit H) and proof box (Line H Proof Box)) in accordance the manufacturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box (Line H Proof Box) on a weekly cleaning schedule in accordance with their Sanitation Standard Operating Procedure (SSOP)	RBLC ID: IN-0161 Indiana Part 70 Significant Source Modification SSM 161-32848-00060

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Allen Foods, Inc. Elkhart, IN	2013	Bread Line 028 Bun Line 048	Catalytic Oxidizer	The VOC emissions from the baking oven 028 and baking oven 048 shall be controlled by a single catalytic oxidizer (029). The overall VOC control efficiency for the catalytic oxidizer (including capture efficiency and destruction efficiency) shall be at least 95%, or the VOC outlet concentration shall not exceed 10 ppmv. The combined VOC emissions from baking oven 028 and the bun line baking oven (048), jointly controlled by catalytic oxidizer 029 and exhausting through vent S17, shall not exceed 4.30 lbs/hr. The Permittee shall operate bread line (Line 028) (consisting of the baking oven and proof box) in accordance with the manufacturer's design and operating specifications. The Permittee shall operate the bun line (Line 048) (consisting of the baking oven and proof box) in accordance with the manufacturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box associated with Bread Line 028 on a weekly cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP). The source shall perform proof box cleaning operations for the proof box associated with Bun Line 048 on a weekly cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP).	RBLC ID: IN-0155 Indiana Federally Enforceable State Operating Permit Significant Permit Revision SPR 039-32174-00643

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Maplehurst Bakeries, Inc. Brownsburg, IN	2012	Donut Production Line - Moline VI Donut Production Line - Moline VIII	None	VOC emissions attributable to proofing and fermentation from donut production line Moline VI (consisting of the fryer (Fryer6) and the proof box (Proof6)) shall not exceed 40.1 tons per twelve (12) consecutive month period. The source shall operate the proof box (Proof6) in accordance with manufacturer's design and operating specifications. The source shall perform proof box cleaning operations for the proof box (Proof6) on a tiered cleaning schedule in accordance with their Sanitation Standard Operating Procedures (SSOP). VOC emissions attributable to proofing and fermentation from donut production line Moline VIII (consisting of fryer (Fryer8) and the proof box (Proof6)) shall not exceed 60.7 tons per twelve (12) consecutive month period. The source shall operate the proof box (Proof8) in accordance with manufacturer's design 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).	RBLC ID: IN-0134 Indiana Part 70 Significant Source Modification SSM 063-31357-00031
Hartford Bakery, Inc. Evansville, IN	2012	Bun Production Line (Line 3)	None	VOC emission shall be limited to 46.7 tons per twelve (12) consecutive month period. 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).	RBLC ID: IN 0148 Indiana Part 70 Significant Source Modification SSM 163-31953-00040

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
Maplehurst Bakeries, Inc. Brownsburg, IN	2012	Donut Fryer 6 (Donut Production Line - Moline VI)	None	VOC emission shall be limited to 40.1 tons per twelve (12) consecutive month period. 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).	RBLC ID: IN-0134 Indiana Part 70 Significant Source Modification SSM 063-31357-00031
Maplehurst Bakeries, Inc. Brownsburg, IN	2012	Donut Fryer 8 (Donut Production Line - Moline VIII)	None	VOC emission shall be limited to 60.7 tons per twelve (12) consecutive month period. 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).	RBLC ID: IN-0134 Indiana Part 70 Significant Source Modification SSM 063-31357-00031
Allen Foods, Inc. Elkhart, IN	2012	Bakery Oven (Bread Line 028)	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. 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).	RBLC ID: IN-0124 Indiana Federally Enforceable State Operating Permit SPR 039-29392-00643

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
The Kroger Company - Indianapolis Bakery Indianapolis, IN	2012	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 2.75 pounds per hour. 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 Federally Enforceable State Operating Permit Significant Permit Revision F097-29287-00161
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).	RBLC ID: IN-0128 Indiana Minor Source Operating Permit M073-29819-00039

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
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).	RBLC ID: IN-0132 Indiana Federally Enforceable State Operating Permit F091-28222-00135
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
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.	RBLC ID: IN-0120 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

Company/ Location	Year Issued	Process Description	Control Device	BACT Emission Limits/Requirements	Reference
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
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

Comparison of Existing BACT with the BACT Proposed by White Castle System, Inc.

White Castle System, Inc. is proposing to continue to use a catalytic oxidizer with a minimum capture and destruction efficiency of 95%, or the VOC outlet concentration shall not exceed 10 ppmv. Based on compliance test results indicating VOC emissions being released at a rate greater than predicted, White Castle System, Inc. is requesting to increase the allowable VOC emissions from the natural gas-fired bread baking oven (P001) from a value not to exceed 0.54 pounds per hour to a value not to exceed 1.19 pounds per hour. White Castle System, Inc. has requested to change the allowable emission rate in order to assure the bread baking oven will be able to achieve compliance with the BACT limit on a consistent basis under normal operational conditions.

During the February 22, 2012 stack testing, White Castle Systems, Inc. had an average uncontrolled emission rate of 18.90 pounds per hour while producing 3,271 pounds of baked product. At the maximum rated capacity of 3,400 lbs/hr, the uncontrolled emission rate would equate to 19.65 pounds per hour. The IDEM, OAQ has applied a safety factor of 5.3% to the 19.65 lb/hr rate, to account for changes in the yeast percent of the products being baked. Taking into account the safety factor, the uncontrolled potential to emit of VOC from the bread baking oven (P001) is 20.69 pounds per hour. After consideration of a 95% capture and destruction efficiency, the controlled potential to emit from the bread baking oven (P001) is 1.034 pounds per hour.

Since White Castle System, Inc. will continue to use a catalytic oxidizer, which is the top ranked control technology for processes that were identified in the EPA's RACT/BACT/LAER Clearinghouse (RBLC) under Process Type Code 70.550 (Bakeries and Snack Food), an economic, energy, and environmental impact analysis is not required.

Step Five: Select BACT

Based on the BACT analysis mentioned above, IDEM, OAQ has determined that the best available control technology (BACT) to control VOC emissions from the bread line, shall be as follows:

Natural Gas-Fired Bread Baking Oven (P001)

(a) The VOC emissions from the natural gas-fired bread baking oven (P001) shall be controlled by a catalytic oxidizer.

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

(c) The VOC emissions from the natural gas-fired bread baking oven (P001) shall not exceed 1.034 pounds per hour.

Proof Box

(a) The source shall operate the proof box associated with the bread baking line 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 1, on a tiered 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) Scrape, sweep, and remove dough/product from floor inside proof box.

(2) Four (4) Week Cleaning Procedure:

(A) Wipe off interior proof box channel rails where needed;
(B) Remove any dough or oil accumulations from channel rails and cross over framework; and
(C) Wash or mop the floor of the proof box. Remove accumulated waste from floor.

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

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

November 21, 2016

Mr. Jeffrey Miller
White Castle System, Inc.
555 West Goodale Street
Columbus, OH 43215

Re: Public Notice
White Castle System, Inc.
Permit Level: Minor Source Operating Permit (MSOP) Significant Permit Revision
Permit Number: 073-37592-00039

Dear Mr. Miller:

Enclosed is a copy of your draft Minor Source Operating Permit (MSOP) Significant Permit Revision, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Rensselaer Republican in Rensselaer, Indiana publish the abbreviated version of the public notice no later than November 22, 2016. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Jasper County Public Library, 208 West Susan Street in Rensselaer, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Tamera Wessel, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-8530 or dial (317) 234-8530.

Sincerely,

Vivian Haun

Vivian Haun
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter 2/17/2016

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

November 17, 2016

Rensselaer Republican
117 North Van Rensselaer Street
Rensselaer, IN 47978

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for White Castle System, Inc., Jasper County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than November 22, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Vivian Haun at 800-451-6027 and ask for extension 3-6878 or dial 317-233-6878.

Sincerely,

Vivian Haun

Vivian Haun
Permit Branch
Office of Air Quality

Permit Level: Minor Source Operating Permit (MSOP) Significant Permit Revision
Permit Number: 073-37592-00039

Enclosure
PN Newspaper.dot 8/27/2015

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

November 21, 2016

To: Jasper County Public Library

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

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: White Castle System, Inc.
Permit Number: 073-37592-00039

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

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. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 2/16/2016

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

Notice of Public Comment

November 21, 2016
White Castle System, Inc.
073-37592-00039

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 2/17/2016

Mail Code 61-53

IDEM Staff	VHAUN 11/21/2016 White Castle System, Inc. 073-37592-00039 DRAFT		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**

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Jeffrey Miller White Castle System, Inc. 555 W Goodale St Columbus OH 43215 (Source CAATS)									
2		David Rife Assistant Vice President White Castle System, Inc. 555 W Goodale St Columbus OH 53215 *(RO CAATS)*									
3		Jasper County Commissioners 115 W. Washington Street Rensselaer IN 47978 *(Local Official)*									
4		Jasper County Health Department 105 W. Kellner St Rensselaer IN 47978-2623 *(Health Department)*									
5		Jasper Co Public Library 208 W Susan St Rensselaer IN 47978-2699 *(Library)*									
6		Mr. Kenny Haun P.O. Box 280 Rensselaer IN 47978 *(Affected Party)*									
7		Rensselaer City Council and Mayors Office P.O. Box 280 Rensselaer IN 47978 *(Local Official)*									
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