AIR AND RADIATION ADMINISTRATION
DRAFT PART 70 OPERATING PERMIT

DOCKET # 24-021-0234

COMPANY: H&S Bakery Inc.

LOCATION: 603 South Bond Street
Baltimore, Maryland 21231

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MARYLAND DEPARTMENT OF THE ENVIRONMENT
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AIR QUALITY PERMITS PROGRAM

TITLE V – PART 70 OPERATING PERMIT PROGRAM OVERVIEW

Title V of the Clean Air Act (amended) requires each state to implement a federally enforceable operating permit program for major sources of air pollution. This program, the Part 70 Permit Program, also known as the Title V Permit Program, is designed to provide a comprehensive administrative document (a Part 70 Operating Permit) that identifies all air emissions sources at a given facility and the federal air quality regulations applicable to those sources. The permit establishes the methodology by which the owner/operator will demonstrate compliance, and includes testing, monitoring, record-keeping, and reporting requirements for each emissions source.

A Part 70 Operating Permit does not authorize new construction, and does not add any new emissions limitations, standards, or work practices on an affected facility. There may, however, be additional testing, record keeping, monitoring, and reporting requirements. A Part 70 Operating Permit is a five-year renewable permit. A responsible official for each facility subject to a Part 70 Operating Permit is required to annually certify compliance with each applicable requirement for that facility.

When an application for a Part 70 Operating Permit is received, the Department will complete a technical review of the application and will prepare a draft Part 70 Operating Permit and Fact Sheet. The Fact Sheet will explain the basis and technical analysis used by the Department to develop the federally enforceable permit conditions, including the required testing, monitoring, record keeping, and reporting provisions for each emissions unit at the permitted facility. The Fact Sheet will also include a description of the facility operations and the current compliance status with applicable requirements. If there are any discrepancies between the Part 70 Operating Permit application and the draft permit, the Fact Sheet will contain a discussion of the inconsistencies and the final resolution.

Public Participation Process

The Part 70 Operating Permit Program provides the public, adjacent states, and EPA the opportunity to review and submit comments on draft permits. The public may also request a public hearing on the draft permit.

The purpose of a public hearing is to give interested parties the opportunity to submit comments for the record which are germane to the draft federally enforceable permit conditions. Comments made at the hearing, or in writing to the Department during the comment period, should address errors and deficiencies in the permit such as unidentified emissions units, incorrect or deficient regulation citation, deficient record keeping, monitoring, reporting or testing requirements and unresolved compliance issues. After the public comment period has closed, the Department will review the formal testimony as part of the final review and prepare a Response to Comments document which will be sent to the EPA along with the draft Part 70 Operating Permit and Fact Sheet.

Testimony on state-only requirements will be kept on file at the Department as part of the formal record, however, state-only rules and regulations are not federally enforceable, and therefore are not within the scope of the EPA review. The Department will keep a record of the identity of the commenters, their statements, a summary of the issues raised during the public comment period, and the Response to Comments document for at least five years.

Citizen Petition to EPA to Object to Permit Issuance

Interested parties may petition the EPA to object to the Part 70 Permit if the EPA has not already objected, within 60 days after the 45-day EPA review period has ended. The petition period will be posted on the EPA website. The EPA will only consider objections to the federally enforceable provisions of the draft permit which were raised with reasonable specificity during the public comment period, unless: (1) the petitioner demonstrates that it was impractical to raise the objections within the public comment period, or (2) the grounds for the objection arose after the comment period. If the EPA agrees with the petition, the Department will reopen, revise, or revoke the permit as determined.

Applicant Objection to Permit Issuance and Recourse

If the applicant objects to the federally enforceable permit conditions contained in the issued Part 70 Operating permit, the applicant has 15 days from receipt of the issued permit to request a contested case hearing. More information on that can be found in 40 CFR, Part 70, and COMAR 26.11.03.11.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF INTENT TO ISSUE PART 70 OPERATING PERMIT, OPPORTUNITY TO SUBMIT WRITTEN COMMENTS OR TO REQUEST A PUBLIC HEARING

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of the application for a renewal Part 70 Operating Permit submitted by H&S Bakery, Inc. located in Baltimore City, MD. The facility includes four baking ovens, and four natural-gas fired boilers.

The applicant is represented by:

Andrew J. Black, VP Engineering
H&S Bakery, Inc
Baltimore, MD 21231

The Department has prepared a draft Part 70 Operating Permit for review and is now ready to receive public comment. A docket containing the application, draft permit, and supporting documentation is available for review on the Department's website, under the Air Quality Permitting Page's Title V link under "Draft Title V Permits" and may be viewed here:

https://tinyurl.com/DraftTitleV

Interested persons may submit written comments or request a public hearing on the draft permit. Written comments must be received by the Department no later than 30 days from the date of this notice. Requests for a public hearing must be submitted in writing and must also be received by the Department no later than 30 days from the date of this notice.

Comments and requests for a public hearing will be accepted by the Department if they raise issues of law or material fact regarding applicable requirements of Title V of the Clean Air Act, and/or regulations implementing the Title V Program in Maryland found in COMAR.

A Request for public hearing shall include the following:

1) The name, mailing address, and telephone number of the person making the request;

2) The names and addresses of any other persons for whom the person making the request is representing; and

3) The reason why a hearing is requested, including the air quality concern that forms the basis for the request and how this concern relates to the person making the request.

All written comments and requests for a public hearing should be directed to the attention of Ms. Shannon Heafey via email at Shannon.heafey@maryland.gov or by post at Air Quality Permits Program, Air and Radiation Administration, 1800 Washington Boulevard Suite 720, Baltimore, Maryland 21230-1720. Further information may be obtained by calling Ms. Shannon Heafey at (410) 537-4433.

H & S BAKERY, INC.
603 SOUTH BOND STREET, BALTIMORE, MD 21231
PERMIT NO. 24-510-0301
PART 70 OPERATING PERMIT FACT SHEET

BACKGROUND

H & S Bakery, Inc.
603 South Bond Street
Baltimore, MD 21231
Responsible Officer: Andrew J. Black, VP of Engineering, (410) 558-3050 x3339.

H & S Bakery, Inc. is located in Baltimore City and is a commercial bakery that produces several varieties of loaf breads and rolls. The facility operates four (4) baking lines, each of which uses a straight dough process. The primary SIC code for the facility is 2051.

The straight dough process does not require an initial fermentation period. All ingredients are mixed and immediately charged to a hopper that extrudes the dough in a continuous uniform stream. The dough passes through several machines to be shaped and cut down before being conveyed through a proof box where the dough rises. The dough is then transferred to an oven for baking, and the finished bread loafs and rolls and transported to a packaging plant via enclosed conveyors.

The Proof Box requires a high humidity environment to effectively process the dough. The facility's boilers produce process steam for the Proof Box. Only one boiler is operated at a time while the second boiler serves as a backup. All boilers and bakery ovens are fired with natural gas only. Based on annual actual production the facility's largest oven is currently oven number 5.

The Permittee also operates a machine shop that has two (2) small Safety-Kleen® degreasers that are not subject to Permit-to-Construct requirements.

The following table summarizes the actual emissions from H & S Bakery, Inc. based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_x (TPY)	SO_x (TPY)	PM_{10} (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2023	3.81	0.024	0.072	3.20	71.37	0
2022	2.76	0.016	0.053	2.32	62.20	0
2021	3.94	0.024	0.074	3.31	68.13	0
2020	4.16	0.026	0.079	3.49	72.23	0
2019	3.70	0.021	0.071	3.10	78.68	0

The major source threshold for triggering Title V permitting requirements in Baltimore City is 25 tons per year for VOC, 25 tons per year for NOx, 100 tons per year for each of the other criteria pollutants, 10 tons per year for a single HAP, and 25 tons per year for the combined total HAPS. Since the actual VOC emissions from the facility are greater than the major source threshold, H & S Bakery, Inc. is required to maintain and renew as required a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

On May 29, 2024, the Department received an application to renew the current Title V – Part 70 Operating Permit. An administrative completeness review was conducted, and the application was deemed to be administratively complete. An administrative completeness letter was sent on June 11, 2024.

Changes Since the Last Title V – Part 70 Operating Permit

The facility has not been modified since the issuance of the last Title V – Part 70 Operating Permit on June 1, 2020.

NSPS and MACT Applicability

NSR Applicability – None of the facility's installations is subject to NSR approval.

PSD Applicability – None of the facility's installations is subject to PSD approval.

NSPS Applicability – BLR-2 Cleaver Brooks steam boiler rated at 12.55 MMBtu/hr, burns only natural gas (ARA registration number 5-2148) was installed in 2013 and is subject to 40 CFR 60, Subpart Dc (NSPS for small steam generating units rated between 10 and 100 MMBtu/hr maximum heat input). The BLR-1 Cleaver Brooks boiler rated at 12.5 MMBtu/hr, burning natural gas only (ARA registration number 5-2213) was installed in 2016 and is also subject to 40 CFR 60, Subpart Dc.

NESHAP Part 61 Applicability – None of the facility's installations is subject to any NESHAP established under 40 CFR 61.

NESHAP Part 63 (MACT) Applicability – None of the facility's installations are subject to a MACT rule. The gas-fired boilers are not subject to Subpart JJJJJJ – National Emission Standards (NESHAP) for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. [Authority: 40 CFR §63.11195(e)]

CAM PLAN

Compliance Assurance Monitoring (CAM) is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purposes of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that the cause of the excursions are corrected. In order for a unit to be subject to CAM, the unit must be located at a major source, be subject to an emission limitation or standard; use a control device to achieve compliance; have pre-control emissions of at least 100% of the major source amount; and must not otherwise be exempt from CAM. Applicability determinations are made on a pollutant-by-pollutant basis for each emissions unit. The facility does not use any control devices to reduce emissions of VOC or HAPs; therefore, CAM requirements do not apply for this Title V permit renewal.

GREENHOUSE GAS (GHG) EMISSIONS

H & S Bakery, Inc. emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: nitrous oxide, methane, and carbon dioxide. These GHGs originate from various processes (i.e., combustion sources such as baking ovens and boilers) contained within the facility premises applicable to H & S Bakery, Inc. The facility has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements.

The emission certification reports for the years 2019, 2020, 2021, 2022, and 2023, showed that H & S Bakery, Inc. is not a major source (threshold: 100,000tpy CO_2e) for GHG's (see Table 2 shown below). While there may be no applicable requirements as a result of PSD, the Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit.

The following table summarizes the actual emissions from H & S Bakery, Inc. based on its Annual Emission Certification Reports:

Table 2: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2019 tpy CO_2e	2020 tpy CO_2e	2021 tpy CO_2e	2022 tpy CO_2e	2023 tpy CO_2e
Carbon dioxide CO_2	1	4,436	4,986	4,729	3,312	4,578
Methane CH_4	25	0.085	0.096	0.090	0.064	0.088
Nitrous Oxide N_2O	298	0.082	0.092	0.086	0.061	0.084
Total GHG CO_{2eq}		**4,436**	**4,986**	**4,729**	**3,312**	**4,578**

EMISSION UNIT IDENTIFICATION

H & S Bakery, Inc. has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Table 3: Emission Unit Identification

Emissions Unit Number	ARA Registration Number	Emissions Unit Name and Description	Date of Installation
BLR-1	5-2213	Cleaver Brooks boiler, rated at 12.5 MMBtu/hr, fired by natural gas only	2016 (replaced original no. 1 boiler installed before 1976)
BLR-2	5-2148	Cleaver Brooks Steam (CBR-700-300-1-1) boiler rated at 12.55 MMBtu/hr, fired by natural gas only	2013 (replaced original no. 2 boiler installed before 1989)
BO-1	8-0278	Baking Oven No. 1, Turkington 970-48, rated at 6.0 MMBtu/hr, fired by natural gas only	2008 (replaced original no. 1 oven installed in 1950)
BO-2		Baking Oven No. 2, Werner & Pfeiderer Ecotherm tunnel oven for rolls, rated at 2.5 MMBtu/hr, fired by natural gas only	2003 (replaced original no. 2 oven installed in 1950)
BO-3		Baking Oven No. 3, Baker Thermal Solutions model 960 tunnel oven for buns and rolls, rated at 3.0 MMBtu/hr, fired by natural gas only	2015 (replaced original no. 3 oven installed in 1950)

BO-5		Baking Oven No. 5, APV Baker model 970-68 tray oven for bread production, rated at 8.5 MMBtu/hr, fired by natural gas only	2004 (replaced original no. 5 oven installed in 1950)

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Permitting History:

Dates of Initial Construction/Registration, Modifications and Reconstructions:

- The dates of initial construction/registration for each registered active installation or process are shown in Table 3 above. There have been no significant reconstructions or modifications to any of the active emissions units since their respective initial installation dates.

- Permit-to-Construct number 510-8-0278M issued October 17, 2003 authorized replacement of the Permittee's number 2 baking oven with a new oven rated at 2.5 MMBtu/hr maximum heat input.

- Permit-to-Construct number 510-8-0278M issued November 5, 2004 authorized replacement of the Permittee's number 5 baking oven with a new oven rated at 8.5 MMBu/hr maximum heat input. The new oven became the facility's largest oven with regard to actual production.

- On March 25, 2008, a Permit to Construct (Permit No. 510-0301-8-0278) was issued for the installation of one 6 MMBtu/hr natural gas fired bakery oven to replace the existing number 1 bakery oven.

- On February 5, 2013, a general Permit to Construct was issued for the installation of one (1) Cleaver Brooks Natural-Gas Fired Steam (CBR-700-300-1-1) boiler rated at 12.55 MMBtu/hr to replace original no. 2 boiler (rated at 18 MMBtu/hr installed before 1989).

- On July 23, 2015, a Permit to Construct (Permit No. 510-0301-8-0278) was issued for the installation of one (1) 3 MMBtu/hr natural gas-fired bakery oven to replace the existing number 3 bakery oven.

- On April 5, 2016, a general Permit to Construct was issued for the installation of one (1) Cleaver Brooks natural gas-fired boiler rated at 12.5 MMBtu/hr to replace the original BLR-1 rated at 12.75 MMBtu/hr installed before 1976.

Applicable Standards and Limits:

1. Table IV-1 – Emissions Units BLR-1 and BLR-2:

BLR-1: One (1) Cleaver Brooks boiler rated at 12.5 MMBtu/hr maximum heat input, burns natural gas only (ARA Registration No. 510-0301-5-2213)
BLR-2: One (1) Cleaver Brooks steam boiler rated at 12.55 MMBtu/hr, burns natural gas only (ARA Registration No. 510-0301-5-2148)

The boilers are used to produce process steam for the facility's Proof Box, which requires a high humidity environment in order to effectively process dough. Only one (1) boiler is operated at a time while the second boiler serves as backup. The boilers are subject to the New Source Performance Standards (NSPS) of 40 CFR 60, Subpart Dc.

A. COMAR 26.11.09.05A(2), which prohibits the discharge of visible emissions, other than water in an uncombined form, from any fuel-burning equipment located in Area III except as provided under COMAR 26.11.09.05A(3).

Exceptions. **COMAR 26.11.09.05A(3)** establishes that Section A(2) does not apply "to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Mechanism For Demonstrating Compliance:

The Permittee is required to report occurrences of visible emissions from the boiler in accordance with conditions number 4 ("Report of Excess Emissions and Deviations") and number 9 ("Compliance Certification Report"), of Section III – Plant Wide Conditions.

Rationale For Compliance Mechanism:

Small boilers that burn natural gas will generally have no visible emissions. Such boilers are designed to operate automatically, without oversight of an operator, and require minimal preventive maintenance to maintain a level of combustion performance that does not cause visible emissions. Although the permit imposes no specific schedule for conducting observations of stack emissions, the

Permittee is required under the general reporting requirement for excess emissions and deviations to report occurrences of any visible emissions that are observed.

B. Operational Limitation: The Permittee shall burn only natural gas in the boilers unless the Permittee obtains from the Department written authorization to burn alternative fuels. [Authority: COMAR 26.11.02.09A]

Mechanism For Demonstrating Compliance:

The Permittee is required to maintain records of the types and amounts of fuel burned to support the annual emissions certification report (permit condition 8 of Section III, Plant Wide Conditions "Emissions Certification Report"). The annual certification report must contain the types, quantities, and analyses of all fuels burned. No additional requirements are needed to show compliance with this operational limitation.

The Permittee shall keep for at least five (5) years a monthly record of fuel combusted or the amounts of each type of fuel delivered to the property each month. [Authority: COMAR 40 CFR §60.48c(g)(2) or (3)]

Rationale:

The required recordkeeping is sufficient for compliance with this requirement.

2. Table IV-2 – Emissions Units BO-1, BO-1, BO-3, BO-5, Four (4) Commercial Bakery Ovens Fired By Natural Gas and that Produce Loaf Breads and Rolls (ARA Registration No. 510-0301-8-0278):

BO-1: Baking Oven No. 1, Turkington 970-48, 6.0 MMBtu/hr maximum heat input, installed in 2008
BO-2: Baking Oven No. 2, Werner & Pfeiderer Ecotherm tunnel oven for rolls, 2.5 MMBtu/hr maximum heat input, installed in 2003
BO-3: Baking Oven No. 3, Baker Thermal Solutions model 960 tunnel oven for buns and rolls, 3.0 MMBtu/hr maximum heat input, installed in 2015
BO-5: Baking Oven No. 5, APV Baker model 970-68 tray oven for bread production, 8.5 MMBtu/hr maximum heat input, installed in 2004

The facility uses four (4) natural gas-fired bakery ovens in order to produce various loaf breads and rolls. The ovens are not subject to any NSPS or NESHAP requirements but are subject to State regulations in order to control emissions of VOC from the facility.

A. Visible Emissions Limitations:

A1. **COMAR 26.11.06.02C(2)**, which requires that a person not cause or permit the discharge of emissions from any installation or building, other than water in uncombined form, which is visible to human observers.

Exceptions: **COMAR 26.11.06.02A(2)** establishes that "the visible emissions standards in COMAR 26.11.06.02C of this regulation do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period."

Mechanism For Demonstrating Compliance:

The Part 70 permit does not impose a specific schedule for conducting observations of stack emissions, however the Permittee is required under the general reporting requirement for excess emissions and deviations to report occurrences of any visible emissions that are observed. Therefore, the compliance demonstration is to meet the recordkeeping and reporting requirements.

Rationale For Not Requiring Periodic Observations:

The Part 70 permit requires that the ovens burn only natural gas (see A2 immediately below), which gives little potential for visible emissions. Particulate emissions are virtually zero, and emissions of ethanol (which is the primary pollutant from the baking process) are not visible.

A2. **Operational Requirement**: The Permittee shall burn only natural gas in each of the ovens unless the Permittee obtains from the Department written authorization to burn alternative fuels. [Authority: Permit-to-Construct 510-8-0278 issued 7/23/2015]

Mechanism for Demonstrating Compliance:

The Permittee is required to maintain records of the types and quantity of fuel burned to support the annual emissions certification report (permit condition 8 of Section III, Plant Wide Conditions "Emissions Certification Report"). The annual certification report must contain the type, quantities, and analyses of all fuels burned. No additional requirements are needed to show compliance with this operational limitation.

Rationale:

The recordkeeping and reporting requirements are sufficient for compliance demonstration.

B. Control of Particulate:

COMAR 26.11.06.03B(2)(a), which limits the concentration of particulate matter in process exhaust gases to not more than 0.03 grains per standard cubic foot of dry exhaust gas.

Mechanism For Demonstrating Compliance:

The Permittee is required to burn only natural gas in the baking ovens (see Operational Requirement A2 above), and this is sufficient to ensure that particulate emissions will be minimal.

Rationale:

The operational requirement is sufficient for compliance demonstration.

C. Control of VOC:

C1. **COMAR 26.11.19.21**, which establishes requirements for control of VOC from commercial bakery ovens.

Note: COMAR 26.11.19.21C(2), states that only the largest oven at the facility is subject to the provisions of COMAR 26.11.19.21D (with an exemption for ovens constructed before 1942), while COMAR 26.11.19.21C(5) states that a person who owns or operates a bakery oven constructed on or after January 1, 1994, that satisfies the conditions in COMAR 26.11.19.21D(1) shall comply with COMAR 26.11.19.21D(2). All of the ovens at the facility were installed after

January 1, 1994, and therefore must meet the requirements in D(2) if the conditions in D(1) are satisfied.

C2. In accordance with **COMAR 26.11.19.21C(5)**, for any commercial bakery oven constructed on or after January 1, 1994, that satisfies the conditions in COMAR 26.11.19.21D(1) the Permittee shall comply with COMAR 26.11.19.21D(2).

Note: To date the Permittee's production has been such that none of the ovens are subject to D(2). The 2023 production and Yt values are as follows:

Bakery Oven	Tonnage	Yt Value
BO-1	18,972	6.0
BO-2	1,757	5.3
BO-3	8,486	4.8
BO-5	16,060	7.2

C3. In accordance with **COMAR 26.11.19.21 & D(1)**, if any of the facility's bakery ovens (*see note above*) exceeds the average annual production tonnage of finished bread, rolls, or other yeast-raised products for the corresponding Yt value listed below, then thereafter the bakery oven shall be subject to COMAR 26.11.19.21D(2).

(1) 10,000 tons with a Yt value of greater than 11.0;

(2) 15,000 tons with a Yt value between 8.1 and 11.0;

(3) 22,500 tons with a Yt value between 5 and 8.0;

(4) 28,000 tons with a Yt value less than 5.

C4. In accordance with **COMAR 26.11.19.21D(2)**, if an affected commercial bakery oven satisfies any of the conditions in COMAR 26.11.19.21D(1), the Permittee shall not cause or permit the discharge of VOC into the atmosphere unless emissions from the affected oven are exhausted directly into a control device which is installed, operated, and maintained to reduce VOC emissions from the bakery oven by 80 percent or more overall. In accordance with **COMAR 26.11.19.21F(3)**, if an affected commercial bakery oven satisfies any of the conditions in COMAR 26.11.19.21D(1) the Permittee shall comply with the requirements of COMAR 26.11.19.21D(2) within 1 calendar year after the year in which the conditions were satisfied.

Mechanism For Demonstrating Compliance:

The Permittee is required to determine and maintain records of the production of yeast raised products and weighted average Yt values for each oven for each month of operation and for all periods of twelve consecutive months. [Authority: Permit-to-Construct 510-0301-8-0278 issued 7/23/2015, COMAR 26.11.03.06C and COMAR 26.11.19.21F(2)]

The Permittee is required to maintain records of annual Yt values and total annual bakery production for each commercial bakery oven. [Authority: Permit-to-Construct 510-0301-8-0278 issued 7/23/2015, COMAR 26.11.03.06C and COMAR 26.11.19.21F(2)]

Currently the Permittee is not required to install add-on controls. If an affected oven's production tonnage exceeds the amount associated with the pertinent Yt value provided under COMAR 26.11.19.21D(1) then the Permittee is required to notify the Department within 10 business days and install the required control device in accordance with the schedule provided under COMAR 26.11.19.21F(3). [Authority: COMAR 26.11.03.06C]

Rationale:

The recordkeeping and reporting requirements are sufficient for compliance demonstration.

COMPLIANCE SCHEDULE

H & S Bakery, Inc. is currently in compliance with all applicable air quality regulations.

TITLE IV – ACID RAIN

Not Applicable.

TITLE VI – OZONE DEPLETING SUBSTANCES

H & S Bakery, Inc. is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

H & S Bakery, Inc. is not subject to the requirements of Section 112(r).

PERMIT SHIELD

H & S Bakery, Inc. did not request a permit shield.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 1 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The small (125 kW) emergency natural gas-fired generator installed 2003 is subject to the following requirements:

(a) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(b) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(c) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(d) 40 CFR 63, Subpart ZZZZ, which states that the Permittee must:

(i) Change oil and filter every 500 hours of operation or annually, whichever comes first;

(ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;

(iii) Inspect all hoses and belts every 500 hours of operation or annually whichever comes first, and replace as necessary;

(iv) Operate and maintain the engine and keep records as specified in Subpart ZZZZ; and

(v) Keep records of the hours of operation of the engine as recorded through a non-resettable hour meter.

(2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(4) No. 5 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The facility's five (5) small parts cleaners/degreasers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from

cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

(b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

(c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

(a) Monthly records of the total VOC degreasing materials used; and

(b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

(5) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of propane (3 storage areas for 30 lbs propane bottles);

(b) No. varies Storage of lubricating oils (55-gallon drums);

(c) No. varies The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(6) any other emissions unit, not listed in this section, with a potential to emit (exclude VOC pollutant) less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 6 Bulk flour silos, each equipped with fabric filters that exhaust inside the building. Five (5) of the silos have a storage capacity of 60,000 pounds, and the remaining silo has a storage capacity of 22,000 pounds.

STATE ONLY ENFORCEABLE REQUIREMENTS

This section of the permit contain state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03 10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

   (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

   (b) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

   (c) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Operating Conditions: No additional requirements.

3. Testing and Monitoring: No additional requirements.

4. Record Keeping and Reporting:

   The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

(a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

(b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

H & S Bakery, Inc. is located at 603 South Bond Street, Baltimore, MD 21231, and is a commercial bakery that produces several varieties of loaf breads and rolls. The facility operates four (4) baking lines, each of which uses a straight dough process. The primary SIC code for the facility is 2051.

The straight dough process does not require an initial fermentation period. All ingredients are mixed and immediately charged to a hopper that extrudes the dough in a continuous uniform stream. The dough passes through several machines to be shaped and cut down before being conveyed through a proof box where the dough rises. The dough is then transferred to an oven for baking, and the finished bread loafs and rolls and transported to a packaging plant via enclosed conveyors.

The Proof Box requires a high humidity environment to effectively process the dough. The facility's boilers produce the process steam for the Proof Box. Only one boiler is operated at a time while the second boiler serves as a backup. All boilers and bakery ovens are fired with natural gas only. Based on annual actual production the facility's largest oven is currently oven number 5.

The Permittee also operates a machine shop that has two (2) small Safety-Kleen® degreasers that are not subject to permit-to-construct requirements.

2. FACILITY INVENTORY LIST

Emissions Unit Number	MDE - ARA Registration Number	Emissions Unit Name and Description	Date of Installation
BLR-1	5-2213	Cleaver Brooks boiler, rated at 12.5 MMBtu/hr, fired by natural gas only	2016 (replaced original no. 1 boiler installed before 1976)
BLR-2	5-2148	Cleaver Brooks Steam (CBR-700-300-1-1) boiler rated at 12.55 MMBtu/hr, fired by natural gas only	2013 (replaced original no. 2 boiler installed before 1989)

BO-1	8-0278	Baking Oven No. 1, Turkington 970-48, rated at 6.0 MMBtu/hr, fired by natural gas only	2008 (replaced original no.1 oven installed in 1950)
BO-2		Baking Oven No. 2, Werner & Pfeiderer Ecotherm tunnel oven for rolls, rated at 2.5 MMBtu/hr, fired by natural gas only	2003 (replaced original no. 2 oven installed in 1950)
BO-3		Baking Oven No. 3, Baker Thermal Solutions model 960 tunnel oven for buns and rolls, rated at 3.0 MMBtu/hr, fired by natural gas only	2015 (replaced original no. 3 oven installed in 1950)
BO-5		Baking Oven No. 5, APV Baker model 970-68 tray oven for bread production, rated at 8.5 MMBtu/hr, fired by natural gas only	2004 (replaced original no. 5 oven installed in 1950)

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARA	Air and Radiation Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide

TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions
VOC	Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

a. An application for an administrative permit amendment shall:

(1) Be in writing;

(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.

b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certifications forms are submitted, and

(2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

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

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate

the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.155.

e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV – 1	
1.0	**Emissions Unit Number(s)** **BLR – 1:** One (1) Cleaver Brooks boiler, 12.5 MMBtu/hr maximum heat input, fired by natural gas only (ARA registration number 510-0301-5-2213; installed 2016) **BLR – 2:** One (1) Cleaver Brooks Steam (CBR-700-300-1-1) boiler rated at 12.55 MMBtu/hr, fired by natural gas only (ARA registration number 510-0301-5-2148; installed after 2013)
1.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations **COMAR 26.11.09.05A(2)**, which requires that a person not cause or permit the discharge of emissions from any fuel burning equipment, other than water in an uncombined form, which is visible to human observers. Exceptions. **COMAR 26.11.09.05A(3)** establishes that Section A(2) does not apply "to emissions during load changing, soot blowing, start-up, or adjustments or occasional cleaning of control equipment if: (a) the visible emissions are not greater than 40 percent opacity; and (b) the visible emissions do not occur for more than 6 consecutive minutes in any sixty minute period."

Table IV – 1	
	B. Operational Limitation: The Permittee shall burn only natural gas in the boilers unless the Permittee obtains from the Department written authorization to burn alternative fuels. [Authority: COMAR 26.11.02.09A]
1.2	**Testing Requirements:** A.& B. See record keeping and reporting requirements.
1.3	**Monitoring Requirements:** A. & B. See record keeping and reporting requirements.
1.4	**Record Keeping Requirements:** A.& B. The Permittee shall keep for at least five (5) years a monthly record of fuel combusted or the amounts of each type of fuel delivered to the property each month. [Authority: 40 CFR §60.48c(g)(2) and (3)]
1.5	**Reporting Requirements:** A. & B. The Permittee shall report occurrences of visible emissions from the boilers in accordance with condition number 4 (“Report of Excess Emissions and Deviations”), and number 9 (“Compliance Certification Report”) of Section III – Plant Wide Conditions.

Table IV – 2	
2.0	**Emissions Unit Numbers: BO-1, BO-2, BO-3, BO-5, Four (4) Commercial Bakery Ovens Fired by Natural Gas and that Produce Loaf Breads and Rolls (ARA Registration No. 510-0301-8-0278):** **BO – 1:** Baking Oven No. 1, Turkington 970-48, 6.0 MMBtu/hr maximum heat input, installed in 2008 **BO – 2:** Baking Oven No. 2, Werner & Pfeiderer Ecotherm tunnel oven for rolls, 2.5 MMBtu/hr maximum heat input, installed in 2003 **BO – 3:** Baking Oven No. 3, Baker Thermal Solutions model 960 tunnel oven for buns and rolls, 3.0 MMBtu/hr maximum heat input, installed in 2015 **BO – 5:** Baking Oven No. 5, APV Baker model 970-68 tray oven for bread production, 8.5 MMBtu/hr maximum heat input, installed in 2004
2.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations A1. **COMAR 26.11.06.02C(2)**, which requires that a person not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. Exceptions: **COMAR 26.11.06.02A(2)** establishes that "the visible emissions standards in COMAR 26.11.06.02C do not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if: (a) The visible emissions are not greater than 40 percent opacity; and (b) The visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period." A2. **Operational Requirement**: The Permittee shall burn only natural gas in each of the ovens unless the Permittee obtains from the Department written authorization to burn alternative fuels. [Authority: permit-to-construct 510-8-0278 issued 7/23/2015] B. Control of Particulate **COMAR 26.11.06.03B(2)(a)**, which limits the concentration of particulate matter in process exhaust gases to not more than 0.03 grains per standard cubic foot of dry exhaust gas. C. Control of VOC

Table IV – 2	
	C1. **COMAR 26.11.19.21**, which establishes requirements for control of VOC from commercial bakery ovens. C2. In accordance with **COMAR 26.11.19.21C(5)**, for any commercial bakery oven constructed on or after January 1, 1994, that satisfies the conditions in COMAR 26.11.19.21D(1), the Permittee shall comply with COMAR 26.11.19.21D(2). C3. In accordance with **COMAR 26.11.19.21C & D(1)**, if any of the facility's bakery ovens exceed the average annual production tonnage of finished bread, rolls, or other yeast-raised products for the corresponding Yt value listed below, then thereafter the Permittee shall be subject to COMAR 26.11.19.21D(2). (1) 10,000 tons with a Yt value of greater than 11.0; (2) 15,000 tons with a Yt value between 8.1 and 11.0; (3) 22,500 tons with a Yt value less than 5.0 and 8.0; (4) 28,000 tons with a Yt value less than 5.0. C4. In accordance with **COMAR 26.11.19.21D(2)**, if an affected commercial bakery oven satisfies any of the conditions in COMAR 26.11.19.21D(1), the Permittee shall not cause or permit the discharge of VOC into the atmosphere unless emissions from the affected oven are exhausted directly into a control device which is installed, operated, and maintained to reduce VOC emissions from the bakery oven by 80 percent or more overall. In accordance with **COMAR 26.11.19.21F(3)**, if an affected commercial bakery oven satisfies any of the conditions in COMAR 26.11.19.21D(1) the Permittee shall comply with the requirements of COMAR 26.11.19.21D(2) within one (1) calendar year after the year in which the conditions were satisfied.
2.2	**<u>Testing Requirements</u>:** A. & B. See record keeping and reporting requirements. C. See monitoring, record keeping, and reporting requirements.

Table IV – 2	
2.3	**Monitoring Requirements:** A. & B. See record keeping and reporting requirements. C. For each month of operation and for all periods of twelve consecutive months the Permittee shall determine the production of yeast raised products and weighted average Yt values for the facility's largest commercial bakery oven installed before January 1, 1994, and for each commercial bakery oven installed on or after January 1, 1994. [Authority: Permit-to-Construct 510-0301-8-0278 issued 7/23/2015, COMAR 26.11.03.06C]
2.4	**Record Keeping Requirements:** A. & B. The Permittee shall maintain records of the types of fuels burned in each commercial bakery oven at the facility. [Authority: Permit-to-Construct 510-0301-8-0278 issued 7/23/2015] C. The Permittee shall maintain for at least five (5) years the following records: (1) total weight of goods produced and weighted average Yt values for each month and for all periods of twelve consecutive months for the facility's largest commercial bakery oven installed before January 1, 1994, and for each bakery oven installed on or after January 1, 1994; and (2) annual Yt values and total annual bakery production for each commercial bakery oven. [Authority: Permit-to-Construct 510-0301-8-0278 issued 7/23/2015, COMAR 26.11.03.06C and COMAR 26.11.19.21F(2)]
2.5	**Reporting Requirements:** A. & B. The Permittee shall report the types of fuels burned in each commercial bakery oven in the Permittee's annual certified emissions statements as required under condition 8 of Section III – Plant Wide Conditions of this Part 70 permit. C. If the Permittee determines that an affected commercial bakery oven satisfies any of the conditions in COMAR 26.11.19.21D(1), the Permittee shall notify the Department in writing within 10 business days of determination and comply with the requirements of COMAR

Table IV – 2	
	26.11.19.21D(2) within one (1) calendar year after the year in which the conditions were satisfied. [Authority: COMAR 26.11.03.06C and COMAR 26.11.19.21F(3)]

SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 1 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The small (125 kW) emergency natural gas-fired generator installed 2003 is subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(D) 40 CFR 63, Subpart ZZZZ, which states that the Permittee must:

(i) Change oil and filter every 500 hours of operation or annually, whichever comes first;

(ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;

(iii) Inspect all hoses and belts every 500 hours of operation or annually whichever comes first, and replace as necessary;

(iv) Operate and maintain the engine and keep records as specified in Subpart ZZZZ; and

(v) Keep records of the hours of operation of the engine as recorded through a non-resettable hour meter.

(2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(4) No. 5 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The facility's five (5) small parts cleaners/degreasers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

(b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to

operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

(c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

(a) Monthly records of the total VOC degreasing materials used; and

(b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

(5) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of propane (3 storage areas for 30 lbs propane bottles);

(b) No. varies Storage of lubricating oils (55-gallon drums);

(c) No. varies The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(6) any other emissions unit, not listed in this section, with a potential to emit (exclude VOC pollutant) less than the “de minimus” levels listed in COMAR 26.11.02.10X (list and describe units):

No. 6 Bulk flour silos, each equipped with fabric filters that exhaust inside the building. Five (5) of the silos have a storage capacity of 60,000 pounds, and the remaining silo has a storage capacity of 22,000 pounds.

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following State-only enforceable requirements:

1. Applicable Regulations:

   (a) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

   (b) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

   (c) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health

2. Operating Conditions: No additional requirements.

3. Testing and Monitoring: No additional requirements.

4. Record Keeping and Reporting:

   The Permittee shall submit to the Department, by April 1 of each year during the term of this permit, a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. The analysis shall include either:

   (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

   (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Quality Environmental Solutions, Inc.
PO Box 44, Bridgewater, VT 05034

May 23, 2024

Maryland Department of the Environment
Air & Radiation Management Administration
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720
Attention: Sarah Wells

Subject Part 70 Permit Application for Renewal
H&S Bakery, Inc.
603 South Bond Street
Baltimore, Maryland 21231
Part 70 Permit No. 24-510-00301

Dear Ms. Wells:

On behalf of H&S Bakery, Inc. and the parent corporation H&S Family of Bakeries, Quality Environmental Solutions (QES) is pleased to submit the attached Part 70 Permit Application for Renewal for the subject bakery. The application includes the following:

- Permit Application (Cover Page and Sections 1 through 7)
- State-Only Enforceable Requirements
- Insignificant Activities Check-Off List
- Calendar Year 2023 Emissions and Compliance Certification Reports

The Budget Reconciliation and Financing Act of 2003 Certification form is attached before the permit and is not included in the page numbering.

If you have any questions regarding this application, please feel free to contact Andrew Black of Northeast Foods at 410-558-3050 or the undersigned at 410-841-5552.

Sincerely,

Erin M. Wyman
Senior Project Manager

Cc: Andrew Black – NE Foods (email)
Maurice Graham – H&S (email)
Eric Mohrmann (email)

QES Project File 623-102

Attachment: Part 70 Permit Application for Renewal

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Boulevard • Suite 720 • Baltimore, Maryland 21230-1720

410-537-3000 • 800-633-6101 • http://www.mde.maryland.gov

Air and Radiation Administration • Air Quality Permits Program

Budget Reconciliation and Financing Act of 2003
(Commonly referred as Maryland House Bill 935)

On July 1, 2003, House Bill 935, Chapter 203 amended § 1-203 of the Environment Article, Annotated Code of Maryland, as follows:

Section 1-203(b).
(1) A license or permit is considered renewed for purposes of this subsection if the license or permit is issued by a unit of State government to a person for the period immediately following a period for which the person previously possessed the same or a substantially similar license.
(2) Before any license or permit may be renewed under this article, **the issuing authority shall verify through the office of the Comptroller (emphasis added)** that the applicant has paid all undisputed taxes and the unemployment insurance contributions payable to the Comptroller or the Secretary of Labor, Licensing, and Regulation or that the applicant has provided for payment in a manner satisfactory to the unit responsible for collection.

In order for the Maryland Department of the Environment (MDE) to verify this compliance, we would need you to provide the following information before we can process or issue your renewal license, permit, or certification:

Current MDE License/Permit No.: 24-510-0301

Name of Licensee or Permit Holder: H&S Bakery, Inc.

Address: 601 South Caroline Street

Baltimore, MD 21231

Contact Name: Andrew J. Black **Title:** VP of Engineering

Contact Telephone Number: 410-558-3050

Privacy Act Notice: This Notice is provided pursuant to the Federal Privacy Act of 1974, 5 U.S.C. § 552a. Disclosure of your Social Security or Federal Tax Identification on this form is mandatory pursuant to the provisions of § 1-203 (2003) of Environment Article, Annotated Code of Maryland, which requires MDE to verify that an applicant for a permit or license has paid all undisputed taxes and unemployment insurance. Social Security and Federal Tax Identification Nos. will not be used for any purposes other than those described in this Notice.

Federal Employer Identification Number (FEIN): 82-3859328

Certification: I certify that the above information is true and correct to the best of my knowledge.

Signature

5-22-2024
Date

Complete and return this form to Sena Harlley at the above address. If you have any questions, please contact Ms. Harlley at (410) 537-3251.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard ● Baltimore MD 21230
(410) 537-3000 ● 1-800-633-6101 ● http://www.mde.state.md.us

PART 70 PERMIT APPLICATION FOR RENEWAL

AIR AND RADIATION ADMINISTRATION

Facilities required to obtain a Part 70 permit under COMAR 26.11.03.01 must complete and return this form. Applications are incomplete unless all applicable information required by COMAR 26.11.03.03 and 26.11.03.13 is supplied. Failure to supply additional information required by the Department to enable it to act on the application may result in loss of the application shield and denial of this application.

Owner and Operator:

Name of Owner or Operator: H & S Bakery, Inc.		
Street Address: 601 South Caroline Street		
City: Baltimore	State: Maryland	Zip Code: 21231
Telephone Number 410-558-3050 x3339		Fax Number 410-558-9338

Facility Information:

Name of Facility: H & S Bakery, Inc.		
Street Address: 603 South Bond Street		
City: Baltimore	State: Maryland	Zip Code: 21231
Plant Manager: Maurice Graham	Telephone Number: 301-448-7417	Fax Number: 410-522-9338
24-Hour Emergency Telephone Number for Air Pollution Matters: Maurice Graham	301-448-7417	

List, on a separate page, the names and telephone numbers of other facility owners and persons with titles.

H & S Bakery, Inc Contact List

Maurice Graham
Plant Manager
301-448-7417 cell
mgraham@hsbakery.com

Eric Mohrmann
Engineer
443-829-5003 cell
emohrmann@nefoods.com

Andrew Black
V.P. Engineering
410.558-3050 x 3339
443-418-6065 cell
ablack@nefoods.com

SECTION 1. CERTIFICATION STATEMENTS

1. Compliance Status with Applicable Enhanced Monitoring and Compliance Certification Requirements

The emissions units identified in this application are in compliance with applicable enhanced monitoring and compliance certification requirements.

2. Certification of Current Compliance with All Applicable Federally Enforceable Requirements

Except for the requirements identified in Section 7 of this application, for which compliance is not achieved, I hereby certify, based on information and belief formed after reasonable inquiry, that the facility is currently in compliance with all applicable federally enforceable requirements and agree that the facility will continue to comply with those requirements during the permit term.

You must complete a Section 7 form for each non-complying emissions unit.

3. Statement of Compliance with Respect to All New Applicable Requirements Effective During the Permit Term

I hereby state, based on information and belief formed after reasonable inquiry, that the facility agrees to meet, in a timely manner, all applicable federally enforceable requirements that become effective during the permit term, unless a more detailed schedule is expressly required by the applicable requirement.

4. Risk Management Plan Compliance

I hereby certify that, based on information and belief formed after reasonable inquiry, that a Risk Management Plan as required under 112(r) of the Clean Air Act:

[ ] has been submitted;

[ ] will be submitted at a future date; or

[X] does not need to be submitted.

5. Statement of Truth, Accuracy, and Completeness

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision and in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

RESPONSIBLE OFFICIAL:
X _____ 5-20-2024

SIGNATURE DATE

Andrew J. Black
PRINTED NAME

VP of Engineering
TITLE

SECTION 2. FACILITY DESCRIPTION SUMMARY

1. Major Activities of Facility

Briefly describe the major activities, including the applicable SIC Code(s) and end product(s).

Wholesale bread and roll bakery. SIC Code 2051 "Manufacturing, Food and Kindered Products, Bakery Products, Bread and Other Bakery Products, Except Cookies and Crakers."

Facility utilizes four ovens (BO-1, BO-2, BO-3 & BO-5) and two boilers (BLR-1 & BLR-2). Equipment fired with natural gas fuel only.

2. Facility-Wide Emissions

A. This facility is required to obtain a Part 70 Operating Permit because it is: Check appropriate box:

- ☑ Actual Major
- ☐ Potential Major·
- ☐ Solid Waste Incineration Unit Requiring Permit Under § 129(e) of CAA

B. List the actual facility-wide emissions below: 2023 Data Tons/Yr

PM10 0.072 NOx 3.815 VOC 71.4 SOx 0.023 CO 3.205 HAPs 0.072

3. Include With the Application:

- ☑ Flow Diagrams showing all emissions units, emission points, and control devices;
- ☑ Emissions Certification Report (copy of the most recent submitted to the Department.)
- ☑ Compliance Certification Report

SECTION 3A.-1 EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BO-1 1a. Date of installation (month/year): March 2008	2. MDE Registration No.:(if applicable) 8-0278

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Baking Oven No. 1, Turkington 970-48, rated at 6.0 MMBtu/hr, fired by natural gas only

* replaced original No. 1 oven installed in 1950

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: N/A

General Reference:_____

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0	19,075 MCF
2.		
3.		

6. Emissions in Tons: 2023

A. Actual Major: x Potential Major:_____ (note: before control device)

B. Actual Emissions: NOx 0.954 SOx 0.006 VOC 29.2 PM10 0.018 HAPs 0.018

SECTION 3A.-2 EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BO-2 1a. Date of installation (month/year): November 2003	2. MDE Registration No.:(if applicable) 8-0278

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Baking Oven No. 2, Werner & Pfeiderer Ecotherm tunnel oven for rolls, rated at 2.5 MMBtu/hr, fired by natural gas only.

* replaced original no. 2 oven installed in 1950

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: N/A

General Reference:_____

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0.0	11,445 MCF
2.		
3.		

6. Emissions in Tons: 2023

A. Actual Major: X Potential Major:_____ (note: before control device)

B. Actual Emissions: NOx 0.572 SOx 0.003 VOC 2.45 PM10 0.011 HAPs 0.011

SECTION 3A. -3 EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BO-3 1a. Date of installation (month/year): July 2015	2. MDE Registration No.:(if applicable) 8-0278

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Baking Oven No. 3, Baker Thermal Solutions model 960 tunnel oven for buns and rolls, rated at 3.0 MMBtu/hr, fired by natural gas only.

* replaced original no. 3 oven installed in 1950

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: N/A

General Reference:_____

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0.0	11,445 MCF
2.		
3.		

6. Emissions in Tons: 2023

A. Actual Major: X Potential Major:_____ (note: before control device)

B. Actual Emissions: NOx 0.572 SOx 0.003 VOC 10.9 PM10 0.011 HAPs 0.011

SECTION 3A.-4 EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BO-5 1a. Date of installation (month/year): October 2004	2. MDE Registration No.:(if applicable) 8-0278

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Baking Oven No. 5, APV Baker model 970-68 tray oven for bread production, rated at 8.5 MMBtu/hr fired by natural gas only.

* replaced original no. 5 oven installed in 1950

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: N/A

General Reference:_____

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0.0	19,075 MCF
2.		
3.		

6. Emissions in Tons: 2023

A. Actual Major: X Potential Major:_____ (note: before control device)

B. Actual Emissions: NOx 0.954 SOx 0.006 VOC 28.8 PM10 0.018 HAPs 0.018

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BLR-1 1a. Date of installation (month/year): April 2016	2. MDE Registration No.:(if applicable)

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Boiler No. 1, Cleaver Brooks boiler, rated at 12.5 MMBtu/hr, fired by natural gas only.

* replaced original no. 1 boiler installed before 1976

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: N/A

General Reference:_____

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0.0	7,630 MCF
2.		
3.		

6. Emissions in Tons:

A. Actual Major: X Potential Major:_____ (note: before control device)

B. Actual Emissions: NOx 0.382 SOx 0.002 VOC 0.021 PM10 0.007 HAPs 0.007

SECTION 3A. EMISSIONS UNIT DESCRIPTIONS

1. Emissions Unit No.: BLR-2 1a. Date of installation (month/year): February 2013	2. MDE Registration No.:(if applicable) 5-2148

3. Detailed description of the emissions unit, including all emission point(s) and the assigned number(s):

Boiler No. 2, Cleaver Brooks Steam boiler rated at 12.55 MMBtu/hr, fired by natural gas only.

* replaced original no. 2 boiler installed before 1989

4. Federally Enforceable Limit on the Operating Schedule for this Emissions Unit: N/A

General Reference:_____

Continuous Processes: _____ hours/day _____ days/year

Batch Processes: _____ hours/batch _____ batches/day

_____ days/year

5. Fuel Consumption:

Type(s) of Fuel	% Sulfur	Annual Usage (specify units)
1. Natural Gas	0.0	7,630 MCF
2.		
3.		

6. Emissions in Tons:

A. Actual Major: X Potential Major:_____ (note: before control device)

B. Actual Emissions: NOx 0.382 SOx 0.002 VOC 0.021 PM10 0.007 HAPs 0.007

SECTION 3B.-1 CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: BLR-1 and BLR-2 **General Reference:** Table IV-1 1.1A; COMAR 26.11.09.05A(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Prohibits the discharge of visible emissions from any fuel-burning equipment, other than water in uncombined form

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report:_____
- ☑ Annual Compliance Certification:_____
- ☑ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: Reference _____ Describe: _____

Reporting: Reference Section III 4 Describe: Report occurrences of visible emissions from the boilers in accordance with "Report of Excess Emissions and Deviations", promptly report orally to MDE, and then submit written description within five days. Repeat in "Compliance Certification Report" submitted by April 1 every calendar year.

Frequency of submittal of the compliance demonstration: Semi Annual by July 31 and January 31
Annual by April 1

SECTION 3B. -2 CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: BLR-1 and BLR-2 **General Reference:** Table IV-1.1B; COMAR 26.11.02.09A

Briefly describe the Emission Standard/Limit or Operational Limitation:

The permittee shall burn only natural gas in the boilers, unless a written authorization is obtained.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☑ Annual Compliance Certification: April 1
- ☑ Semi-Annual Monitoring Report: by July 31 and January 31

Methods used to demonstrate compliance: Natural gas is the only fuel burned at the facility.

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: Reference Section III 8 Describe: Maintain records of type and quantity of fuel burned.
Keep five years of monthly fuel combusted records.

Reporting: Reference _____ Describe: _____

Frequency of submittal of the compliance demonstration: Semi Annual by July 31 and January 31
Annual by April 1

SECTION 3B.-3 CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: BO-1, BO-2, BO-3, and BO-5 **General Reference:** Table IV-2.1A; COMAR 26.11.06.02C(2)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Visible Emission Limitations, requires that a person not cause or permit the discharge of emissions from any installation or building, other than water in uncombined form, which is visible to human observers.

Operational Requirement: burn only natural gas in the ovens.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☑ Annual Compliance Certification: Apirl 1
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance: no specific schedule for visible observations, April 1 for fuel type.

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: Reference _____ Describe: _____

Maintan records of types of fuels burned in each commercial bakery oven at the facility.

Reporting: Reference Section III 4 and 8 Describe: _____

general reporting requirement for excess emissions and deviaitons, report occurrences of any visible emissions that are observed

Report types of fuels burned in each oven in annual certified emissions statements.

Frequency of submittal of the compliance demonstration: no specific schedule for visible observations April 1 for fuel type.

SECTION 3B.-4 CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: BO-1, BO-2, BO-3, and BO-5 **General Reference:** Table IV-2.1 B; COMAR 26.11.06.03B(2)(a)

Briefly describe the Emission Standard/Limit or Operational Limitation:

Control of Particulates; limits the concentration of particulate matter in process exhaust gases to not more than 0.03 grains/scf

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☑ Annual Compliance Certification: April 1
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance: Burn only natural gas, sufficient to ensure particulate emission will be minimal.

Monitoring: Reference _____ Describe: _____

Testing: Reference _____ Describe: _____

Record Keeping: Reference _____ Describe: _____

Maintan records of types of fuels burned in each commercial bakery oven at the facility.

Reporting: Reference Section III 8 Describe: _____

Report types of fuels burned in each oven in annual certified emissions statements.

Frequency of submittal of the compliance demonstration: Annual by April 1

SECTION 3B.-5 CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

Emissions Unit No.: BO-1, BO-2, BO-3, and BO-5 **General Reference:** Table IV-2.1 C; COMAR 26.11.19.21

Briefly describe the Emission Standard/Limit or Operational Limitation:
Control of VOC. For commercial bakery ovens constructed after 1994, if exceed production and corresponding Yt values then the oven is subjected to a control device. None of the ovens exceed the limits, 2023 production:
BO-1: 18,972 tons, 6.0 avg. Yt. /BO-2: 1,757 tons, 5.3 avg. Yt. /BO-3: 8,486 tons, 4.8 avg. Yt. /BO-5: 16,060 tons, 7.2 avg. Yt.

Permit Shield Request: _____

Compliance Demonstration:

Check appropriate reports required to be submitted:

- ☐ Quarterly Monitoring Report: _____
- ☑ Annual Compliance Certification: April 1
- ☐ Semi-Annual Monitoring Report: _____

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe:
determine the production of yeast raised products and weighted Yt values for each oven

Testing: Reference _____ Describe: _____

Record Keeping: Reference 26.11.03.06C Describe:
Keep five years of monthly and 12-month rolling basis for production and Yt values.
Keep annual Yt value and total annual bakery production for each oven.

Reporting: Reference 26.11.03.06C Describe:
If an affected commercial bakery oven exceeds the production and Yt limits, notify the Department in writing within 10 days.

Frequency of submittal of the compliance demonstration: Annual by April 1

SECTION 3C. OBSOLETE, EXTRANEOUS, OR INSIGNIFICANT PERMIT CONDITIONS

N/A

List permit to construct conditions which should be considered to be obsolete, extraneous, or environmentally insignificant.

Emissions Unit No.: _____Permit to Construct No. _____

Emissions Point No.	Date Permit Issued	Condition No.	Brief Description of Condition and Reason for Exclusion

SECTION 3D. ALTERNATE OPERATING SCENARIOS

N/A

Emissions Unit No.:_____

Briefly describe any alternate operating scenarios. Assign a number to each scenario for identification purposes.

SECTION 3E. CITATION TO AND DESCRIPTION OF APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS FOR AN ALTERNATE OPERATING SCENARIO

N/A

Scenario No.: _____

Emissions Unit No.: _____ General Reference: _____

Briefly describe any applicable Emissions Standard/Limits/Operational Limitations:

_____

_____

_____

_____

_____

_____

Compliance Demonstration

Methods used to demonstrate compliance:

Monitoring: Reference _____ Describe: _____

_____

_____

_____

Testing: Reference _____ Describe: _____

_____

_____

_____

Record Keeping: Reference _____ Describe: _____

_____

_____

_____

Reporting: Reference _____ Describe: _____

_____

_____

_____

Frequency of submittal of the compliance demonstration: _____

SECTION 4. CONTROL EQUIPMENT

N/A

1. Associated Emissions Units No. :	2. Emissions Point No.:
3. Type and Description of Control Equipment:	

4. Pollutants Controlled:	Control Efficiency:

5. Capture Efficiency:

SECTION 5.-1 SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations. See attached 2023 Annual Emission Certification data

Pollutant	NOx	SOx	CO	Pb	VOC
CAS Number			630-08-0	7439-92-1	
Emissions Unit #BLR1	0.382	0.002	0.320	0.00	0.021
Emissions Unit #BLR2	0.382	0.002	0.320	0.00	0.021
Emissions Unit #BO1	0.954	0.006	0.801	0.00	29.2
Emissions Unit #BO2	0.572	0.003	0.481	0.00	2.45
Emissions Unit #BO3	0.572	0.003	0.481	0.00	10.9
Emissions Unit #BO5	0.954	0.006	0.801	0.00	28.8
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total	3.816	0.022	3.204	0.00	71.392

Type text here

SECTION 5.-2 SUMMARY SHEET OF POTENTIAL EMISSIONS

List all applicable pollutants in tons per year (tpy) pertaining to this facility. The Emissions Unit No. should be consistent with numbers used in Section 3. Attach a copy of all calculations. See attached 2023 Annual Emission Certification data

Pollutant	PM10	PM conden	CO2	CH4	N2O
CAS Number			124389	74828	10024972
Emissions Unit #BLR1	0.007	0.022	458	0.009	0.008
Emissions Unit #BLR-2	0.007	0.022	458	0.009	0.008
Emissions Unit #BO-1	0.018	0.054	1,145	0.022	0.021
Emissions Unit #BO-2	0.011	0.033	687	0.013	0.013
Emissions Unit #BO-3	0.011	0.033	687	0.013	0.013
Emissions Unit #BO-5	0.018	0.054	1,145	0.022	0.021
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Emissions Unit #					
Fugitive Emissions					
Total	0.072	0.217	4,578	0.088	0.084

SECTION 6. EXPLANATION OF PROPOSED EXEMPTIONS FROM OTHERWISE APPLICABLE FEDERALLY ENFORCEABLE REQUIREMENTS

N/A

Describe and cite the applicable requirements to be exempted. Complete this Section only if the facility is claiming exemptions from or the non-applicability of any federally enforceable requirements.

1. Applicable Requirement:

2. Brief Description:

3. Reasons for Proposed Exemption or Justification of Non-applicability:

SECTION 7. COMPLIANCE SCHEDULE FOR NONCOMPLYING EMISSIONS UNITS

N/A

1. Emissions Unit #	Anticipated Compliance Date
Applicable Federally Enforceable Requirement being Violated:	

2. Description of Plan to Achieve Compliance:

_____

_____

_____

_____

_____

_____

Certified Progress Reports for sources in noncompliance shall be submitted at least quarterly to the Department.

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STATE-ONLY ENFORCEABLE REQUIREMENTS

Facility Information:

Name of Facility: H&S Bakery, Inc.	County Baltimore City
Premises Number:	
Street Address: 603 S. Bond Street	
24-hour Emergency Telephone Number for Air Pollution Matters: 443-418-6065	
Type of Equipment (List Significant Units): Facility Wide	

CITATION TO AND DESCRIPTION OF APPLICABLE STATE-ONLY ENFORCEABLE REQUIREMENTS

Registration No.: _____

Emissions Unit No.: Facility Wide **General Reference:** Section VI

Briefly describe the requirement and the emissions limit (if applicable):

COMAR 26.11.06.08 AND .09- Prohibit the discharge of emissions beyond the property line.

COMAR 26.11.15.05- Implement T-BACT to control emissions of toxic air pollutants.

COMAR 26.11.15.06- Prohibit the discharge of toxic air pollutants.

Methods used to demonstrate compliance:

No additional requirements.

Annual toxics certification to be submitted by April 1.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST

III. Check-off List of Emissions Units and Activities Exempt from the Part 70 Permit Application

Insignificant Activities

Place a check mark beside each type of emissions unit or activity that is located at the facility. Where noted, please indicate the number of that type of emissions unit or activity located at the facility.

(1) No. ___ Fuel burning equipment using gaseous fuels or no. 1 or no. 2 fuel oil, and having a heat input less than 1,000,000 Btu (1.06 gigajoules) per hour;

(2) No. ___ Fuel-burning equipment using solid fuel and having a heat input of less than 350,000 Btu (0.37 gigajoule) per hour;

(3) No. 1 Stationary internal combustion engines with less than 500 brake horsepower (373 kilowatts)of power output natural gas emergency generator 125 KW, installed in 2003

(4) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(5) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(6) No. 2 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

(7) ___ Commercial bakery ovens with a rated heat input capacity of less than 2,000,000 Btu per hour;

(8) ___ Kilns used for firing ceramic ware, heated exclusively by natural gas, liquefied petroleum gas, electricity, or any combination of these;

(9) ___ Confection cookers where the products are edible and intended for human consumption;

(10) ___ Die casting machines;

(11) ___ Photographic process equipment used to reproduce an image upon sensitized material through the use of radiant energy;

(12) ___ Equipment for drilling, carving, cutting, routing, turning, sawing, planing, spindle sanding, or disc sanding of wood or wood products;

(13) ___ Brazing, soldering, or welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals and not directly related to plant maintenance, upkeep and repair or maintenance shop activities;

(14) ___ Equipment for washing or drying products fabricated from metal or glass, provided that no VOC is used in the process and that no oil or solid fuel is burned;

(15) ___ Containers, reservoirs, or tanks used exclusively for electrolytic plating work, or electrolytic polishing, or electrolytic stripping of brass, bronze, cadmium, copper, iron, lead, nickel, tin, zinc, and precious metals;

(16) Containers, reservoirs, or tanks used exclusively for:

(a) ___ Dipping operations for applying coatings of natural or synthetic resins that contain no VOC;

(b) ___ Dipping operations for coating objects with oils, waxes, or greases, and where no VOC is used;

(c) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;
3 storage areas for propane containers

(d) No. varies Storage of lubricating oils:

(e) No. ___ Unheated storage of VOC with an initial boiling point of 300 °F (

(f) No. ___ Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel,

(g) No. ___ Storage of motor vehicle gasoline and having individual tank capacities of 2,000 gallons (7.6 cubic meters) or less;

(h) No. varies The storage of VOC normally used as solvents, diluents, thinners, inks, colorants, paints, lacquers, enamels, varnishes, liquid resins, or other surface coatings and having individual capacities of 2,000 gallons (7.6 cubic meters) or less;

(17) ___ Gaseous fuel-fired or electrically heated furnaces for heat treating glass or metals, the use of which does not involve molten materials;

(18) Crucible furnaces, pot furnaces, or induction furnaces, with individual capacities of 1,000 pounds (454 kilograms) or less each, in which no sweating or distilling is conducted, or any fluxing is conducted using chloride, fluoride,

or ammonium compounds, and from which only the following metals are poured or in which only the following metals are held in a molten state:

(a) ___ Aluminum or any alloy containing over 50 percent aluminum, if no gaseous chloride compounds, chlorine, aluminum chloride, or aluminum fluoride is used;

(b) ___ Magnesium or any alloy containing over 50 percent magnesium;

(c) ___ Lead or any alloy containing over 50 percent lead;

(d) ___ Tin or any alloy containing over 50 percent tin;

(e) ___ Zinc or any alloy containing over 50 percent zinc;

(f) ___ Copper;

(g) ____ Precious metals;

(19) ____ Charbroilers and pit barbecues as defined in COMAR 26.11.18.01 with a total cooking area of 5 square feet (0.46 square meter) or less;

(20) ___ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(21) ____ Certain recreational equipment and activities, such as fireplaces, barbecue pits and cookers, fireworks displays, and kerosene fuel use;

(22) ___ Potable water treatment equipment, not including air stripping equipment;

(23) ___ Firing and testing of military weapons and explosives;

(24) ___ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;

(25) ____ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act;

(26) ____ Grain, metal, or mineral extrusion presses;

(27) ____ Breweries with an annual beer production less than 60,000 barrels;

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION
RENEWAL TITLE V APPLICATION INSIGNIFICANT ACTIVITIES LIST

(28) ___ Natural draft hoods or natural draft ventilators that exhaust air pollutants into the ambient air from manufacturing/industrial or commercial processes;

(29) ____ Laboratory fume hoods and vents;

(30) No. ___ Sheet-fed letter or lithographic printing press(es) with a cylinder width of less than 18 inches;

For the following, attach additional pages as necessary:

(31) any other emissions unit, not listed in this section, with a potential to emit less than the "de minimus" levels listed in COMAR 26.11.02.10X (list and describe units):

No. 6 Bulk flour silos, each equipped with fabric filters that exhaust inside the building

No. ___ _____

No. ___ _____

No. ___ _____

No. ___ _____

(32) any other emissions unit at the facility which is not subject to an applicable requirement of the Clean Air Act (list and describe):

No. ___ _____

No. ___ _____

No. ___ _____

H&S Bakery Potential Emissions Calculations

Since the boilers and bakery ovens do not have separate natural gas usage meters, the total facility natural gas usage is estimated by source based on the approximate percentage of use as follows:

Boiler 1 (BLR 1) - 10%

Boiler 2 (BLR 2) - 10%

Bread Oven 1 (BO-1) - 25%

Bread Oven 2 (BO-2) - 15%

Bread Oven 3 (BO-3) - 15%

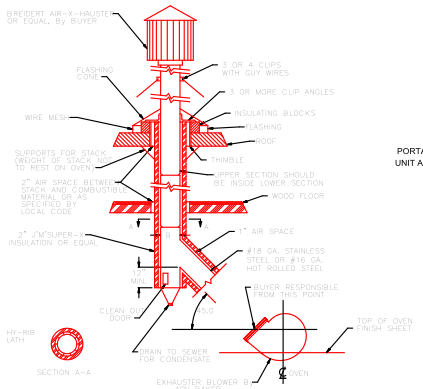
Bread oven 5 (BO-5) - 25%

Natural Gas (NG) Constituent Emission Data is calculated based on AP-42 Factor x NG quantity (MMCF) = tons/year

---

Bakery volatile organic compound (VOC) emissions are based on the MDE-approved formula developed by the American Institute of Baking (AIB), The formula calculates the amount of VOC emissions based on the predicted pounds of ethanol generated per pound of product produced depending on the product-specific yeast percentage (Yt value).

D 133614 1/2



STACK NOTES

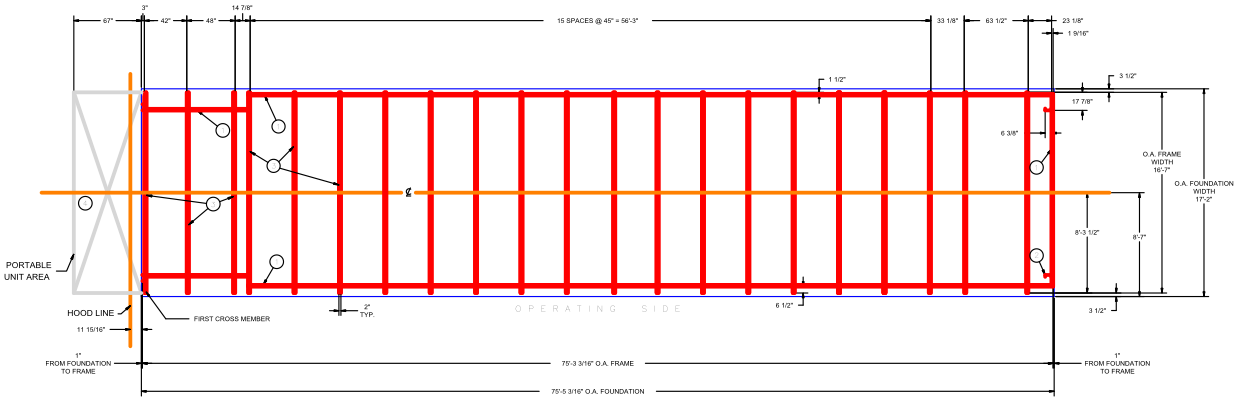
1. STACKS TO BE FABRICATED By BUYER.
2. STACKS TO BE OF SUFFICIENT HEIGHT TO CLEAR ANY OBSTRUCTIONS WHICH MAY CAUSE ADVERSE DRAFT CONDITIONS.
3. BUYER TO PROVIDE ROOF DRAINS FOR CONDENSATION FROM STACKS.
4. BUYER TO PROVIDE ROOF OPENINGS FOR STACKS.
5. APV BAKER INC. IS NOT RESPONSIBLE FOR INSTALLATION OR SUPERVISION OF INSTALLATION OF STACKS. IT IS THE BUYER'S RESPONSIBILITY TO COMPLY WITH INSURANCE AND LOCAL SAFETY CODES.

STACK DETAIL

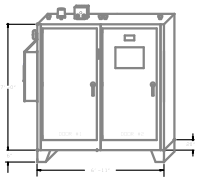
SUGGESTED CONSTRUCTION OF EXHAUST STACKS FOR APV BAKER INC. DIRECT GAS FIRED OVENS

STACK	DIA. "B"	CFM AIR
FRONT	14"	2451
REAR	16"	4204
* PROVANE	16"	2000

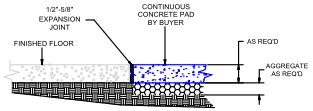
* IF APPLICABLE



PLAN VIEW



Control Panel (Not to Scale)



FOUNDATION PAD DETAIL
Not to Scale

FRAME & FOUNDATION DIAGRAM

CUSTOMER TO FURNISH SMOOTH & LEVEL (± 1/4") CONCRETE SLAB CAPABLE OF CARRYING THE OVEN LOAD. FOUNDATION TO EXTEND A MINIMUM OF 3 1/2" BEYOND THE SIDES AND 1" BEYOND THE ENDS OF THE OVEN BASE FRAME.

CUSTOMER FOUNDATION REQUIRMENTS

1. INSULATION RETAINER ONLY, NO LOAD.
2. 800 LB. LOAD ON CHANNEL ENDS.
3. 350 LBS./LINEAL FT. LOAD ON ALL CROSS MEMBERS.
4. 75 LBS./SQ. FT. LOAD FOR PORTABLE UNIT AREA.

H&S BAKERY
BALTIMORE, MD

FOUNDATION DRAWING FOR 970 TRAY OVEN
48 TRAY, 32" X 12'-4" - R.H. OPERATING SIDE

SCALE	DATE	DRAWN	JOB NO.
1/4"=1'-0"	7/17/2007	GRANTHAM	133587

REVISIONS	DATE	BY

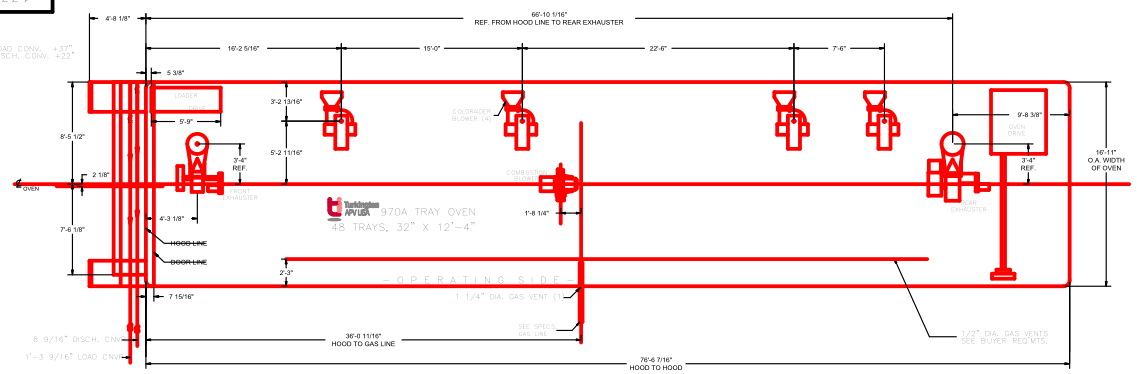
CHECKED	RJS 10/10/07
APPROVED	JBH 10/10/07

Turkington APV USA

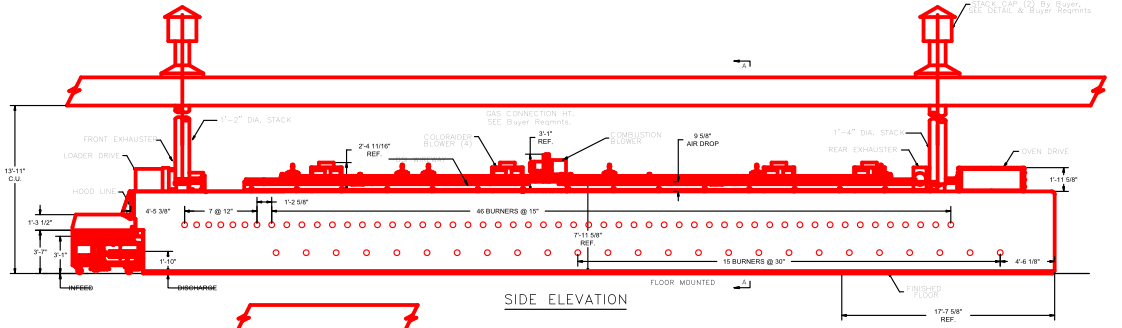
Turkington APV USA, Goldsboro, NC 27533

133614 1/2 D

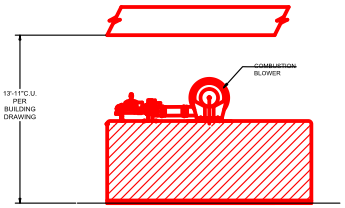
133614 2/2



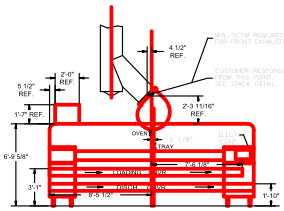
PLAN VIEW



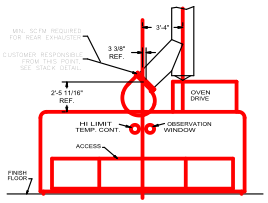
SIDE ELEVATION



SECTION A:A



FRONT ELEVATION



REAR ELEVATION

TURKINGTON APV USA MODEL 970-48 TRAY OVEN
DIRECT GAS FIRED, 32" X 12'-4" TRAYS

MACHINE NO.: 1220M140005241
INSURANCE CARRIER: XXX
OVEN BAKE RANGE: 19 TO 26 MINUTES
PRODUCT: BREAD

OVEN ELECTRICAL SPECIFICATIONS:

OVEN DRIVE MOTOR	7 1/2 HP
LOADER DRIVE MOTOR	1 HP
UNLOADER DRIVE MOTOR	1 HP
LOAD CONVEYOR DRIVE MOTOR	1 1/2 HP
DISCHARGE CONVEYOR DRIVE MOTOR	1 1/2 HP
COMBUSTION BLOWER DRIVE MOTOR	15 HP
EXHAUSTER DRIVE MOTOR	2 HP
COLORADER DRIVE MOTORS	4 HP

BUYER'S REQUIREMENTS FOR INSTALLATION & OPERATION:

ELECTRICAL: 1. TO BRING & CONNECT 79 KVA AT 480-60-3 POWER TO THE CONTROL PANEL FROM A FUSED DISCONNECT.

2. TO BRING & CONNECT A 120 VOLT LINE TO THE CONTROL PANEL FOR PANEL SERVICE & FOR OVEN INSPECTION LIGHTS. THE OVEN HAS LIGHTS IN FRONT, BACK & ALONG THE OPERATING SIDE. THE SWITCH FOR THE OVEN LIGHTS IS ON THE CONTROL PANEL.

GAS: 1. TO BRING & CONNECT 6600 CUBIC FEET PER HOUR OF 1000 BTU GAS TO A 3" CONNECTION ON THE OVEN AT A CONSTANT PRESSURE BETWEEN 8-15" W.C. (THIS INCLUDES A 50% INCREASE FOR AN ADEQUATE SAFETY FACTOR). NEAREST PRESSURE-REDUCING REGULATOR TO BE 20 FT. FROM THE OVEN CONNECTION. (REFERENCE BAKER PERKINS DRAWING 921-100-D)

GAS VENTS. 1. TO SUPPLY (1) 1/2" DIA.* VENT FROM EACH OF THE (6) ZERO REGULATORS, & (1) FROM THE MAIN GAS REGULATOR TO THE ATMOSPHERE. TOTAL 1/2" VENTS (7).

* LINE SIZE BASED ON 20'-0" EQUIVALENT PIPE LENGTH. EQUIVALENT PIPE LENGTH = ACTUAL PIPE LENGTH + 5'-0" FOR EACH 90° BEND. INCREASE ENTIRE VENT LINE ONE PIPE SIZE FOR EACH 20'-0" EQUIVALENT PIPE LENGTH.

2. TO SUPPLY (1) 1 1/4" DIA. VENT FROM BETWEEN THE TWO HONEYWELL VALVES TO THE ATMOSPHERE.

3. TO PIPE EACH VENT INDIVIDUALLY FROM APPROXIMATELY 8'-6" TO THE ATMOSPHERE.

AIR STACKS: 1. BUILD PER RECOMMENDED STACK CONSTRUCTION DETAIL FOUND ON OVEN FOUNDATION DRAWING.

FOUNDATION: 1. TO FURNISH SMOOTH & LEVEL (± 1/4") CONCRETE SLAB, 2" ABOVE THE SURROUNDING FLOOR, AND CAPABLE OF CARRYING THE OVEN LOAD. FOUNDATION TO EXTEND A MINIMUM OF 3 1/2" BEYOND THE SIDES AND 1" BEYOND THE ENDS OF THE OVEN BASE FRAME.

DRAIN: 1. TO FURNISH DRAIN THAT EXTENDS 3" ABOVE OVEN FOUNDATION. TERMINAL PIECE TO BE CAST IRON SOIL PIPE HUB INTO WHICH THE PIPE FROM THE OVEN STEAM INJECTORS WILL DRAIN THROUGH AN AIR BREAK.

2. TO PROVIDE A TRAP BELOW THE OVEN FOUNDATION FOR THE 1 1/2" DIAMETER DRAIN.

STEAM: 1. TO BRING & CONNECT 1400 POUNDS PER HOUR (60) B.H.P. OF STEAM TO A 3" DIAMETER CONNECTION. STEAM TO BE AT A CONSTANT PRESSURE BETWEEN 3 & 4 P.S.I. AT THE CONNECTION POINT. IF PRESSURE EXCEEDS THIS LIMIT, CUSTOMER TO SUPPLY AND INSTALL STEAM REGULATING VALVE AND NECESSARY TRAPS. VALVE TO BE 20 FEET MINIMUM DISTANCE FROM OVEN.

2. TO INSULATE ALL STEAM LINES AND ROUTE THEM TO AVOID CONDENSATION POCKETS. LINES TO SLOPE TOWARD OVEN.

PRODUCTION DATA

ITEM	VARIETY	PAN LENGTH (IN)	PAN WIDTH (IN)	PCS/ PAN	PROOF TIME (MIN)	PROOFER PCS/MIN	BAKE TIME (MIN)	OVEN CYCLES/MIN	OVEN PCS/ MIN	SYSTEM PCS/MIN	SYSTEM PANS/MIN
A	2LB. RYE	31.75	12.88	4	60	94.34	25.00	1.92	76.80	76.80	19.20
B	ITALIAN	31.00	11.75	5	60	129.01	21.00	2.29	125.71	125.71	25.14
C	1LB. OPEN TOP	31.00	11.38	5	60	132.84	20.00	2.40	132.00	132.00	26.40

CHECKED	RJS 10/10/07
APPROVED	JBH 10/10/07

H&S BAKERY
BALTIMORE, MD

CONNECTION DRAWING FOR 970 TRAY OVEN
48 TRAY, 32" X 12'-4" - R.H. OPERATING SIDE

SCALE	DATE	DRAWN	
1/4"=1'-0"	7/17/2007	GRANTHAM	133567

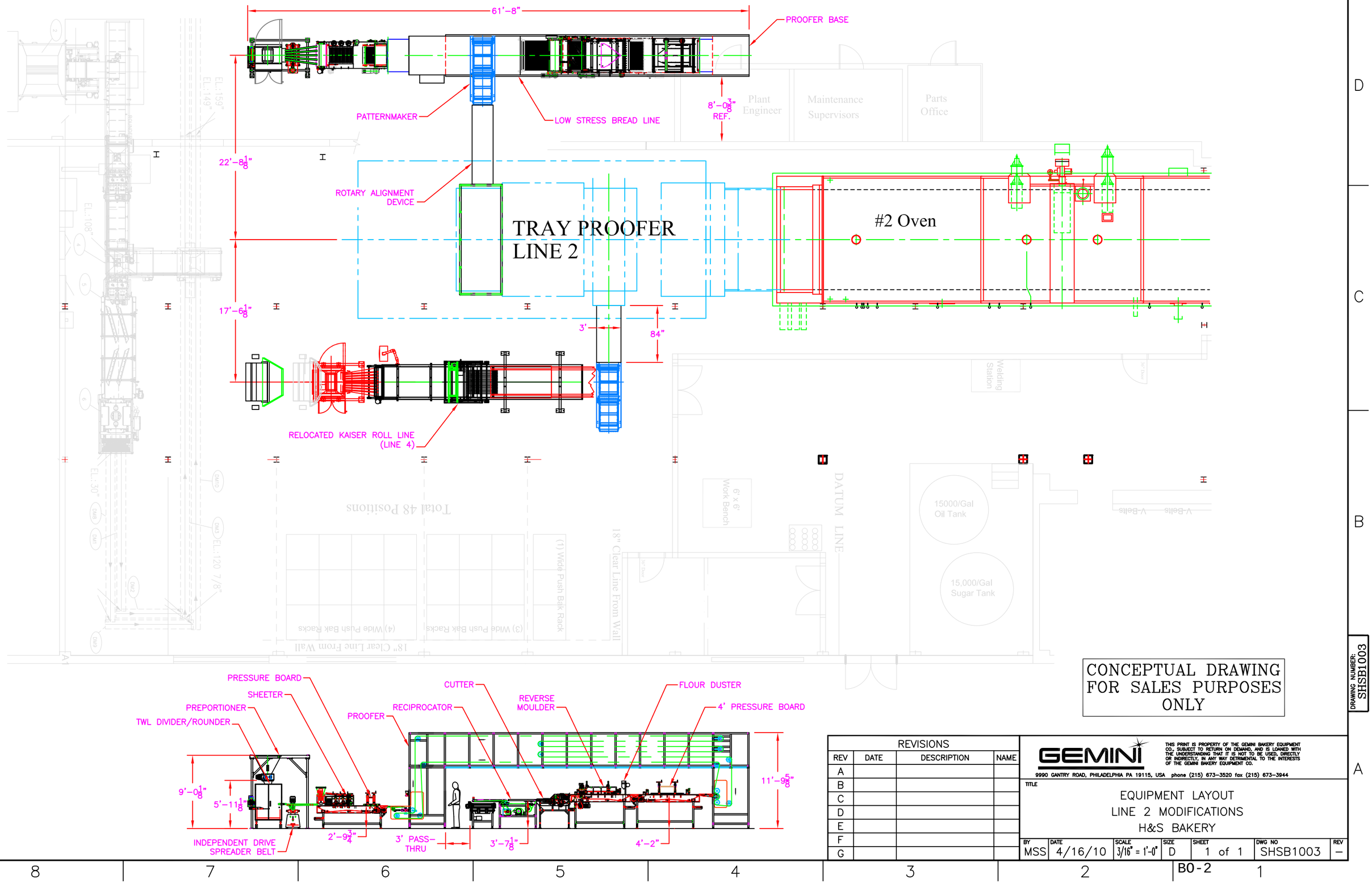
REVISIONS	DATE	BY
A		

Turkington APV USA, Goldsboro, NC 27533

133614 2/2 D

B0-1

DRAWING NUMBER: SHSB1003



CONCEPTUAL DRAWING FOR SALES PURPOSES ONLY

REVISIONS			
REV	DATE	DESCRIPTION	NAME
A			
B			
C			
D			
E			
F			
G			

GEMINI

9990 GANTRY ROAD, PHILADELPHIA PA 19115, USA phone (215) 673-3520 fax (215) 673-3944

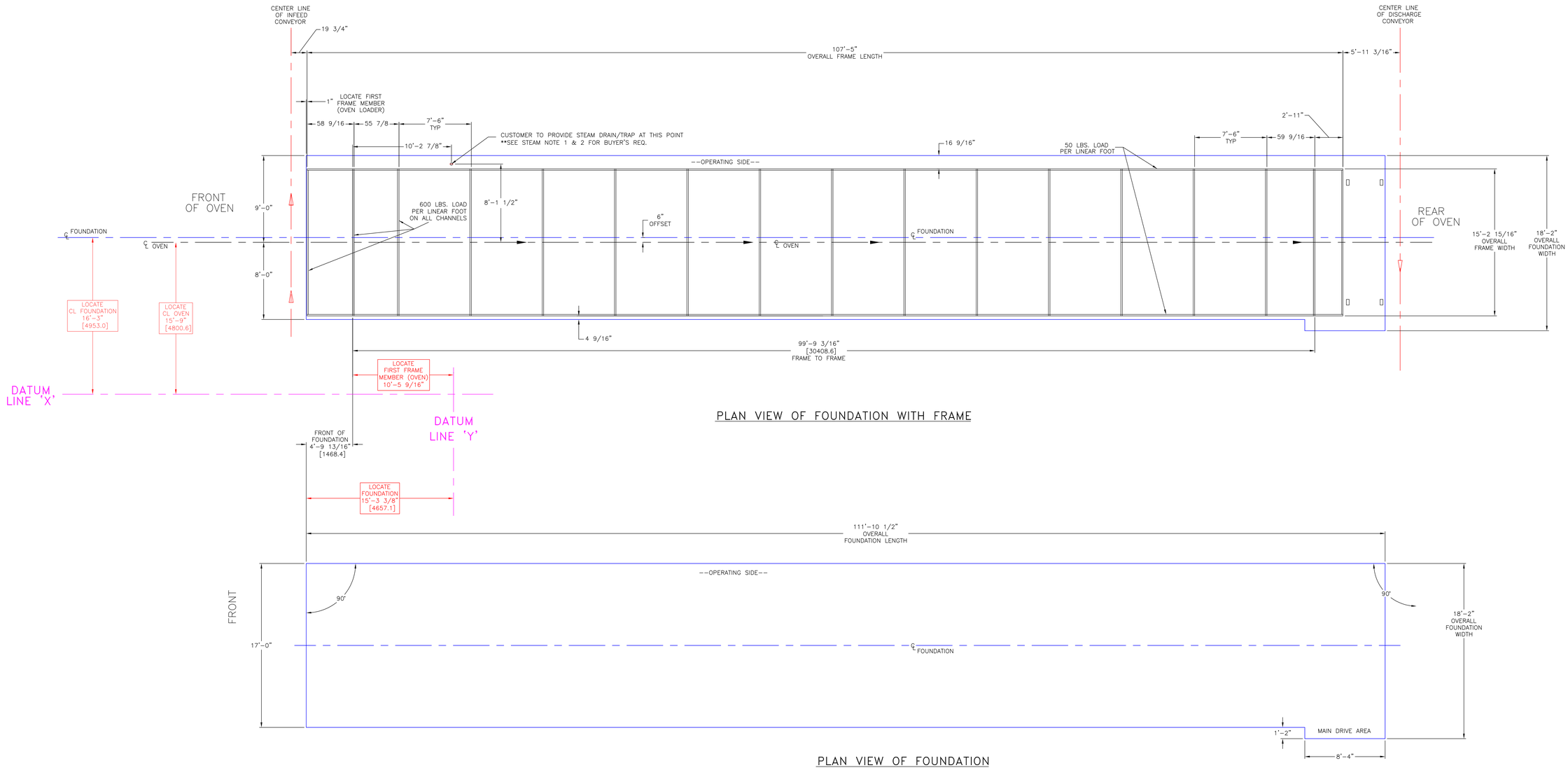
TITLE

EQUIPMENT LAYOUT
LINE 2 MODIFICATIONS
H&S BAKERY

BY	DATE	SCALE	SIZE	SHEET	DWG NO	REV
MSS	4/16/10	3/16" = 1'-0"	D	1 of 1	SHSB1003	–

B0-2

DRAWING NUMBER: SHSB1003



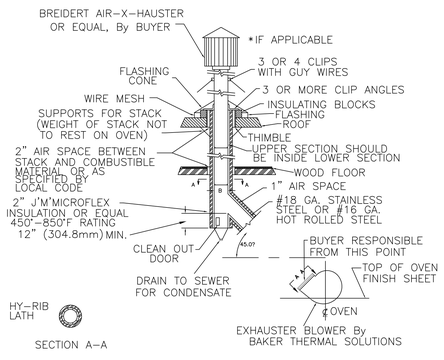
PLAN VIEW OF FOUNDATION WITH FRAME

PLAN VIEW OF FOUNDATION

STANDARD STACK DETAIL

SUGGESTED CONSTRUCTION OF EXHAUST STACKS
FOR BAKER THERMAL SOLUTIONS DIRECT GAS FIRED OVENS
NOT TO SCALE

STACK	DIA. "B"	SCFM AIR @ FAN PRESSURE (START-UP/PURGE)
FRONT	12"	1800 @ 2" W.C.
CENTER	12"	2300 @ 2" W.C.
REAR	12"	1800 @ 2" W.C.

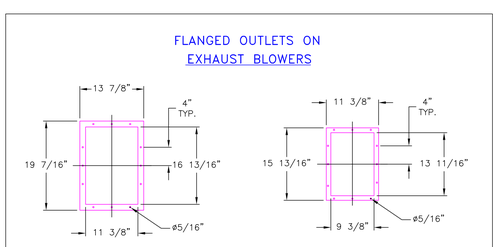


SECTION A-A

STACK NOTES

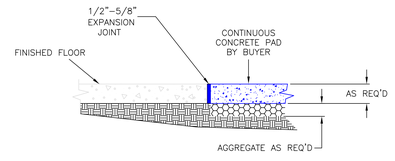
1. STACKS TO BE FABRICATED BY BUYER
2. STACKS TO BE OF SUFFICIENT HEIGHT TO CLEAR ANY OBSTRUCTIONS WHICH MAY CAUSE ADVERSE DRAFT CONDITIONS.
3. BUYER TO PROVIDE ROOF OPENINGS FOR STACKS.
4. BAKER THERMAL SOLUTIONS IS NOT RESPONSIBLE FOR INSTALLATION OR SUPERVISION OF INSTALLATION OF STACKS. IT IS THE BUYER'S RESPONSIBILITY TO COMPLY WITH INSURANCE AND LOCAL SAFETY CODES.

FLANGED OUTLETS ON EXHAUST BLOWERS



FRAME AND FOUNDATION LOAD DIAGRAM

CUSTOMER TO ENSURE THE FINISHED FLOOR IS SMOOTH & LEVEL (± 1/8") AND CAPABLE OF CARRYING THE OVEN LOAD. TO ENSURE THE PROPER FUNCTION OF THE OVEN, BTS RECOMMENDS THE CUSTOMER FURNISH AN INDEPENDENT CONCRETE SLAB AS FOUNDATION FOR THE OVEN. THE FOUNDATION IS TO EXTEND BEYOND THE OVEN FRAME 17" ON THE OPERATING SIDE & 5" ON THE NON-OPERATING SIDE. THE FOUNDATION IS TO EXTEND 1" BEYOND LOADER FRAME ON THE INFEED END, AND 52.5" ON THE DISCHARGE END OF THE OVEN BASE FRAME. THE FOUNDATION IS TO INCLUDE A 1/2" - 5/8" EXPANSION JOINT AROUND THE PERIMETER.
**NOTE: CUSTOMER HAS OPTED AGAINST THE 2" ELEVATED PAD.



FOUNDATION PAD DETAIL

Not to Scale

H&S BAKERIES
BALTIMORE, MARYLAND

BO-3

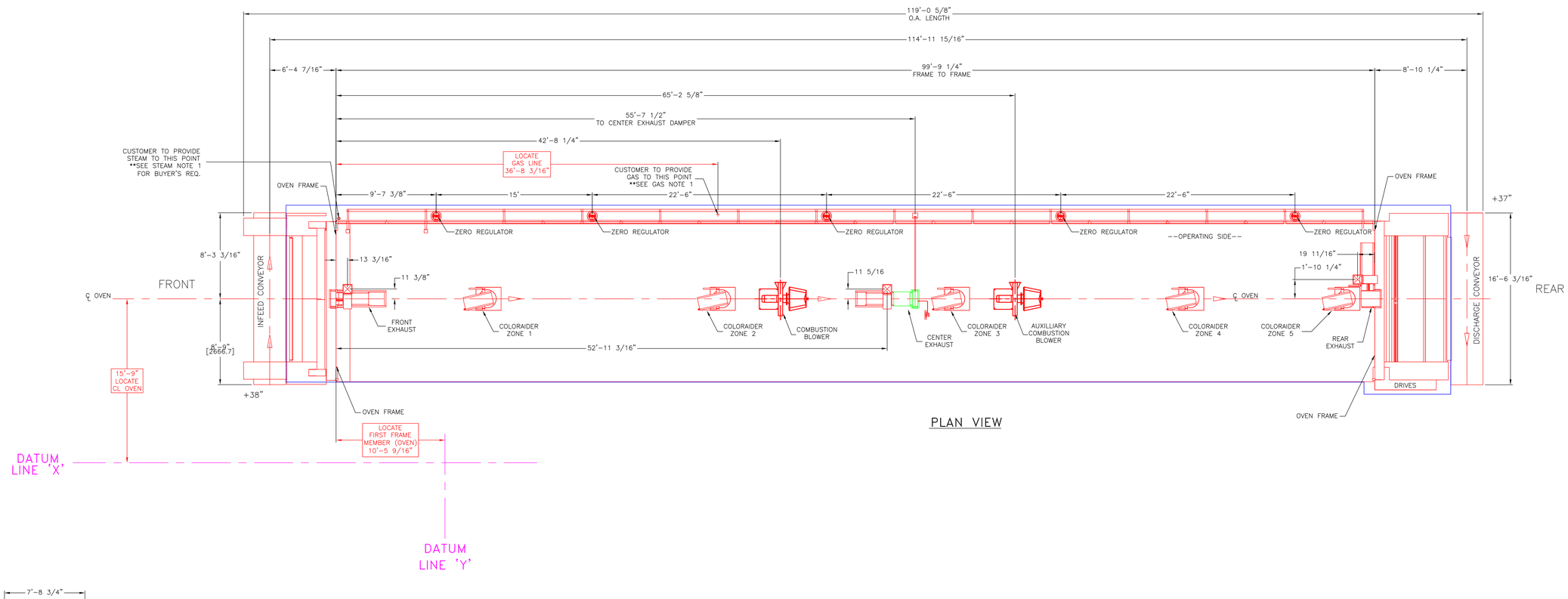
FOUNDATION DRAWING FOR 960 TUNNEL OVEN
100'-0" X 12'-4" HEARTH, LH OPERATING

SCALE:	1/4"=1'-0"	DATE:	5/1/2015	DRAWN BY:	JDW	REF.DWG:	
D							
C							
B							
A							
	REVISIONS					DATE	BY

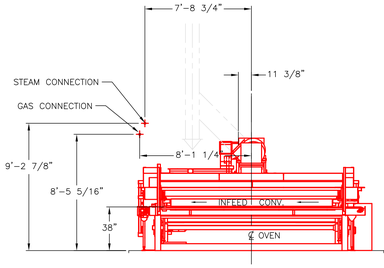
Baker THERMAL SOLUTIONS

57431560M1 1/2

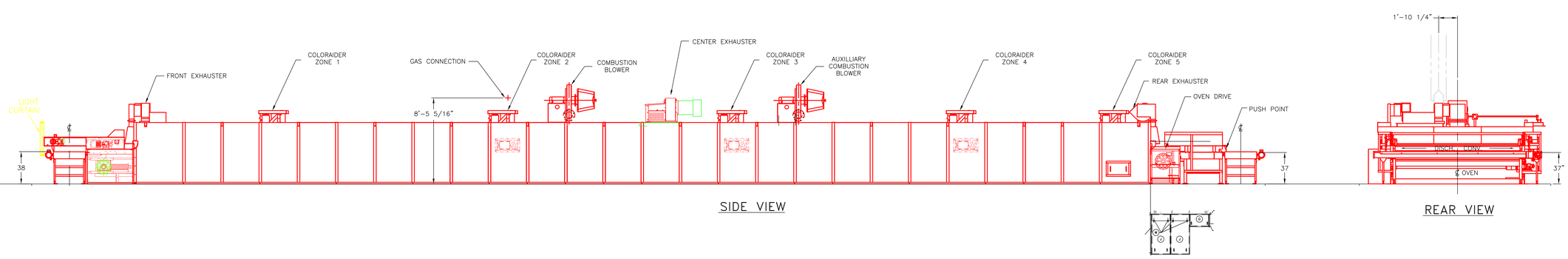
REV E



PLAN VIEW

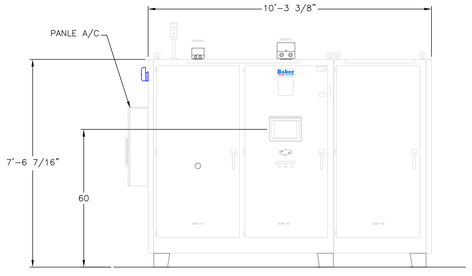


FRONT VIEW



SIDE VIEW

REAR VIEW



OVEN CONTROL PANEL

20" DEEP (508mm)
SCALE: 2X

Variety	Pan Width	Pan Length	Pcs/Length	Pcs/Width	Pcs/Pan	Target Production	Proof Times	Bake Times	Scaling Weights
4.5" WHITE KAISER	22.00	27.75	5.00	4.00	20.00	362.51	58	13.50	2.8
CORN DUSTER	22.00	27.75	5.00	4.00	20.00	362.51	58	13.50	2.9
WHITE CORN DUSTER	22.00	27.75	5.00	4.00	20.00	362.51	58	13.50	3.0
WHEAT KAISER	22.00	27.75	5.00	4.00	20.00	362.51	58	13.00	2.9
RED ROBIN BUNS	22.00	27.75	5.00	4.00	20.00	362.51	58	13.75	3.5
SESAME POTATO	22.00	27.75	5.00	4.00	20.00	362.51	58	13.50	2.9
DARDEN	22.00	27.75	5.00	4.00	20.00	362.51	58	12.50	2.9
4.5" BRIOCHE	22.00	27.75	5.00	4.00	20.00	362.51	58	13.00	4.0
ONION ROLL	21.63	31.88	6.00	4.00	24.00	328.56	58	16.00	3.0
DINNER ROLL	19.81	29.06	6.00	4.00	24.00	472.56	58	10.00	2.0
CFA MULTI GRAIN	20.25	29.50	6.00	4.00	24.00	460.80	58	10.00	2.5
NARDONES	16.50	29.00	8.00	2.00	16.00	320.00	58	16.00	5.6
NARDONES WHITE WHEAT	17.88	29.00	6.00	2.00	12.00	199.06	58	16.50	5.6

BAKER THERMAL SOLUTIONS
960 TUNNEL OVEN
100'-0" X 12'-4"
GRID HEARTH

MACHINE NO.:1560M140005743
OVEN BAKE RANGE: 10-16.5 MIN
PRODUCT: ROLLS/BUNS

OVEN ELECTRICAL SPECIFICATIONS:

OVEN DRIVE MOTOR----------2 @ 4 HP (5.98 kw)
LOADER DRIVE MOTOR----------2 HP (1.49 kw)
INFEED CONVEYOR MOTOR----------1 HP (.74 kw)
UNLOADER CONVEYOR----------2 HP (1.49 kw)
UNLOADER BAR MOTOR----------2 HP (1.49 kw)
DISCHARGE CONVEYOR MOTOR--------1.0 HP (.74 kw)
COMBUSTION BLOWER MOTOR--------2 @ 15 HP = 30 HP (22.44 kw)
COLORAIDER DRIVE MOTORS----------5 @ 5 HP = 25 HP (18.7 kw)
FRONT EXHAUST BLOWER----------1.5 HP (1.12 kw)
CENTER EXHAUST BLOWER----------2 HP (1.49 kw)
REAR EXHAUST BLOWER----------1.5 HP (1.12 kw)

OF OVEN ZONES ----------5
OF TOP BURNERS ----------18
OF BOTTOM BURNERS ----------69

BUYER'S REQUIREMENTS FOR OVEN INSTALLATION & OPERATION:

ELECTRICAL: 1. TO BRING & CONNECT 161 KVA AT 480-60-3 POWER TO THE CONTROL PANEL FROM A FUSED DISCONNECT.
2. TO BRING & CONNECT A 24 VDC VOLT LINE TO THE CONTROL PANEL FOR PANEL SERVICE & FOR OVEN INSPECTION LIGHTS. THE OVEN HAS LIGHTS IN FRONT, BACK & ALONG THE OPERATING SIDE. THE SWITCH FOR THE OVEN LIGHTS IS ON THE CONTROL PANEL.

GAS: 1. TOTAL BTU REQUIRED WILL BE 6,090,000 BTU/HR. LNG NATURAL GAS REQUIRED WILL BE 6090 CFH (BASED ON CALORIFIC VALUE OF 1000 BTU/CFT). CONN. GAS TO A 3" NPTF CONNECTION ON THE OVEN AT A MINIMUM PRESSURE OF 12" WATER COLUMN (SIZE OF SUPPLY LINE TO BE 50% GREATER FOR AN ADEQUATE SAFETY FACTOR). NEAREST PRESSURE-REDUCING REGULATOR TO BE 20 FT. FROM THE OVEN CONNECTION.
(REFERENCE BAKER THERMAL SOLUTIONS DRAWING 921-100-D)

GAS VENTS: 1. TO SUPPLY (1) 1 1/2" (38mm) DIA. VENT FROM EACH OF THE (5) ZERO REGULATORS, & (1) FROM THE MAIN GAS REGULATOR TO THE ATMOSPHERE. TOTAL 1 1/2" (38mm) VENTS (6).
* LINE SIZE BASED ON 20'-0" EQUIVALENT PIPE LENGTH. EQUIVALENT PIPE LENGTH = ACTUAL PIPE LENGTH + 5'-0" FOR EACH 90° BEND. INCREASE ENTIRE VENT LINE ONE PIPE SIZE FOR EACH 20'-0" (6096mm) EQUIVALENT PIPE LENGTH.
2. TO SUPPLY (1) 1 1/2" (38mm) DIA. VENT FROM BETWEEN THE TWO SAFETY SHUT OFF VALVES TO THE ATMOSPHERE.
3. TO PIPE EACH VENT INDIVIDUALLY FROM APPROXIMATELY 8'-6" TO THE ATMOSPHERE.

EXHAUST STACKS: 1. BUILD PER RECOMMENDED STACK CONSTRUCTION DETAIL.

FOUNDATION: 1. TO FURNISH SMOOTH & LEVEL (+ 1/8") (3.2mm) CONCRETE SLAB, CAPABLE OF CARRYING THE OVEN LOAD. FOUNDATION TO EXTEND 1" BEYOND THE ENDS OF THE OVEN BASE FRAME. (SEE PAGE 1)

STEAM: 1. TO BRING & CONNECT 1200 POUNDS PER HOUR (30) B.H.P. OF STEAM TO A 3" DIAMETER CONNECTION. CONNECTION LOCATED APPROXIMATELY 3" FROM FIRST OVEN FRAME MEMBER AND APPROXIMATELY 7'-8 3/4" FROM CENTERLINE OF OVEN. STEAM TO BE AT A CONSTANT PRESSURE BETWEEN 3 & 5 P.S.I. AT THE CONNECTION POINT. IF PRESSURE EXCEEDS THIS LIMIT, CUSTOMER TO SUPPLY AND INSTALL STEAM REGULATING VALVE AND NECESSARY TRAPS. VALVE TO BE 20 MINIMUM DISTANCE FROM OVEN.
2. TO INSULATE ALL STEAM LINES AND ROUTE THEM TO AVOID CONDENSATION POCKETS. LINES TO SLOPE TOWARD OVEN.

DRAIN: 1. TO FURNISH DRAIN THAT EXTENDS 3" ABOVE OVEN FOUNDATION. TERMINAL PIECE TO BE CAST IRON SOIL PIPE HUB INTO WHICH THE PIPE FROM THE OVEN STEAM INJECTORS WILL DRAIN THROUGH AN AIR BREAK. (SEE PAGE 1)
2. TO PROVIDE A TRAP BELOW THE OVEN FOUNDATION FOR THE 1 1/2" DIAMETER DRAIN. (SEE PAGE 1)

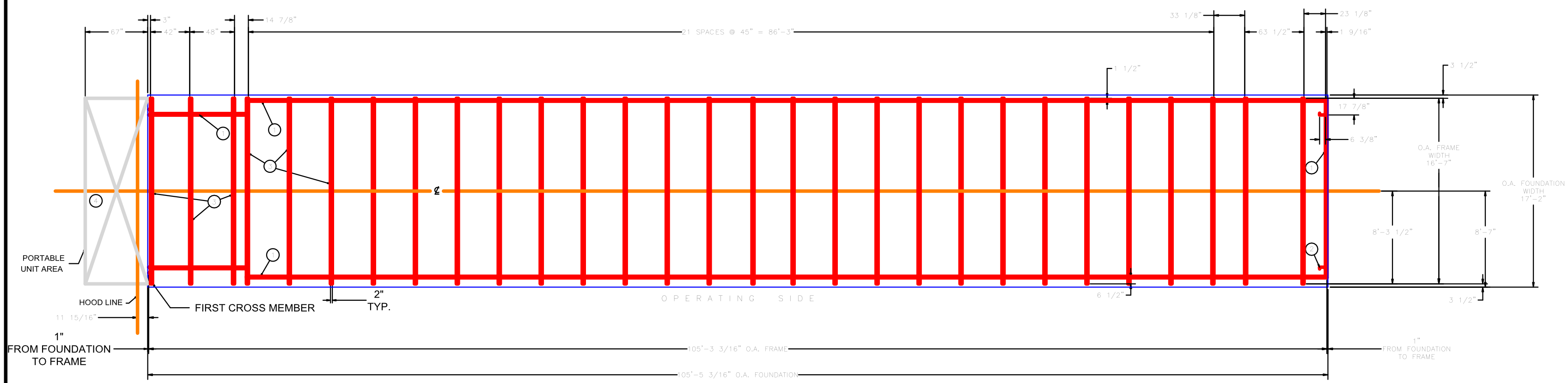
H&S BAKERIES
BALTIMORE, MARYLAND
BO-3

UTILITIES CONNECTION DRAWING FOR 960 TUNNEL OVEN
100'-0" X 12'-4" HEARTH, LH OPERATING

SCALE:	1/4"=1'-0"	DATE:	5/1/2015	DRAWN BY:	JDW	REF.DWG:	
D							
C							
B							
A							
	REVISIONS					DATE	BY

57341560M1 2/2 | SIZE E

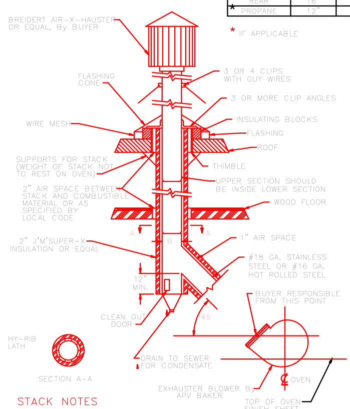
D | 132991 1/2



PLAN VIEW

STACK	DIA. "B"	CFM AIR
FRONT	14"	2451
REAR	16"	4224
* PROPANE	12"	2000

* IF APPLICABLE



STACK NOTES

1. STACKS TO BE FABRICATED By BUYER
2. STACKS TO BE OF SUFFICIENT HEIGHT TO CLEAR ANY OBSTRUCTIONS WHICH MAY CAUSE ADVERSE DRAFT CONDITIONS.
3. BUYER TO PROVIDE ROOF DRAINS FOR CONDENSATION FROM STACKS.
4. BUYER TO PROVIDE ROOF OPENINGS FOR STACKS.
5. APV BAKER INC. IS NOT RESPONSIBLE FOR INSTALLATION OR SUPERVISION OF INSTALLATION OF STACKS. IT IS THE BUYER'S RESPONSIBILITY TO COMPLY WITH INSURANCE AND LOCAL SAFETY CODES.

STACK DETAIL

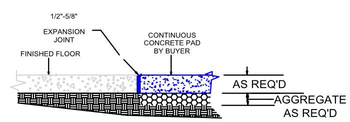
SUGGESTED CONSTRUCTION OF EXHAUST STACKS FOR APV BAKER INC. DIRECT GAS FIRED OVENS

FRAME & FOUNDATION DIAGRAM

CUSTOMER TO FURNISH SMOOTH & LEVEL (± 1/4") CONCRETE SLAB CAPABLE OF CARRYING THE OVEN LOAD. FOUNDATION TO EXTEND A MINIMUM OF 3 1/2" BEYOND THE SIDES AND 1" BEYOND THE ENDS OF THE OVEN BASE FRAME.
THE CONCRETE SLAB TO BE FLUSH WITH THE SURROUNDING FLOOR.

CUSTOMER FOUNDATION REQUIRMENTS

1. INSULATION RETAINER ONLY, NO LOAD.
2. 300 LB. LOAD ON CHANNEL ENDS.
3. 350 LBS./LINEAL FT. LOAD ON ALL CROSS MEMBERS.
4. 75 LBS./SQ. FT. LOAD FOR PORTABLE UNIT AREA.



FOUNDATION PAD DETAIL
Not to Scale

PRELIMINARY DRAWING
SUBJECT TO FINAL ENGINEERING

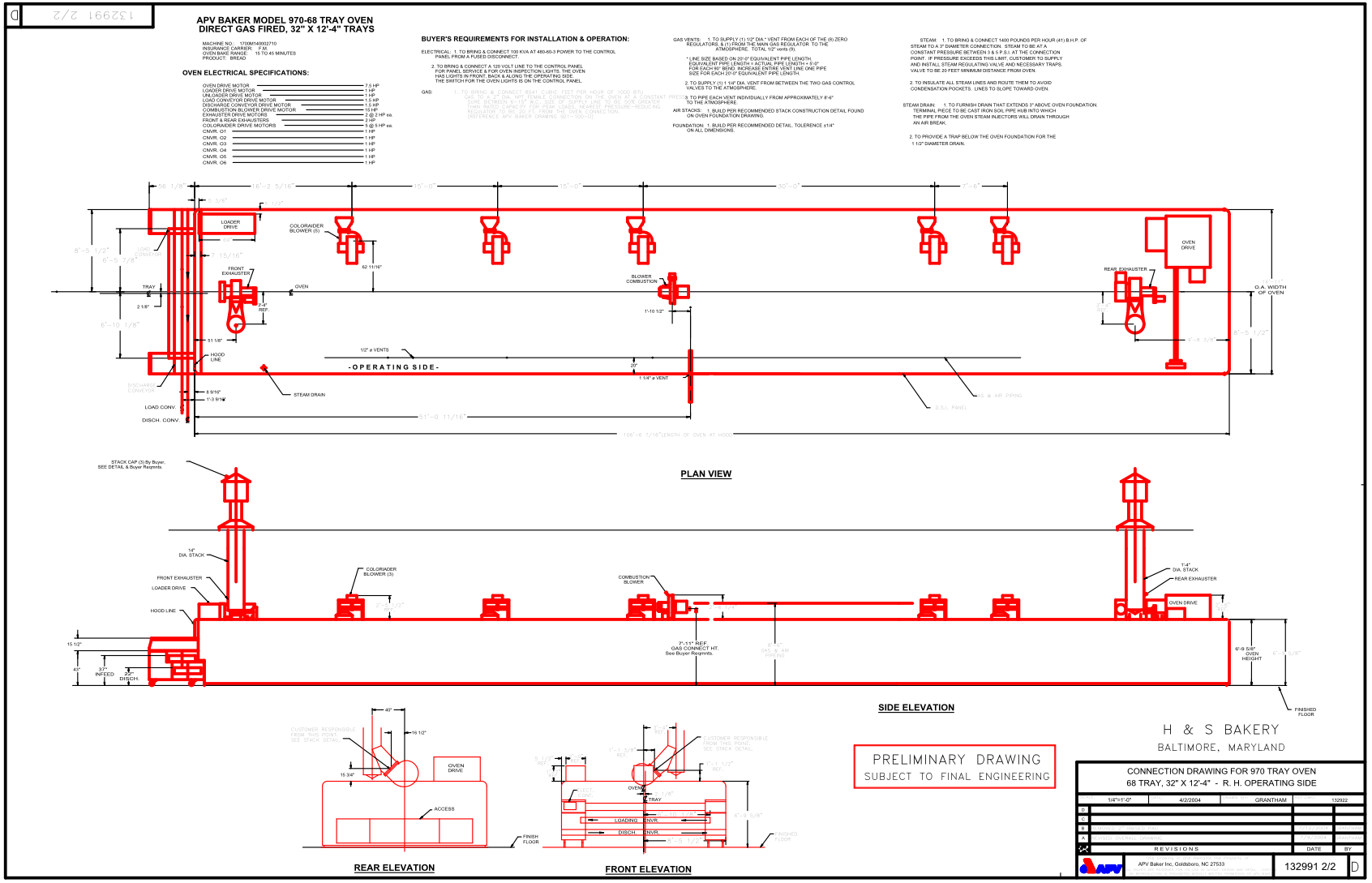
H & S BAKERY
BALTIMORE, MARYLAND

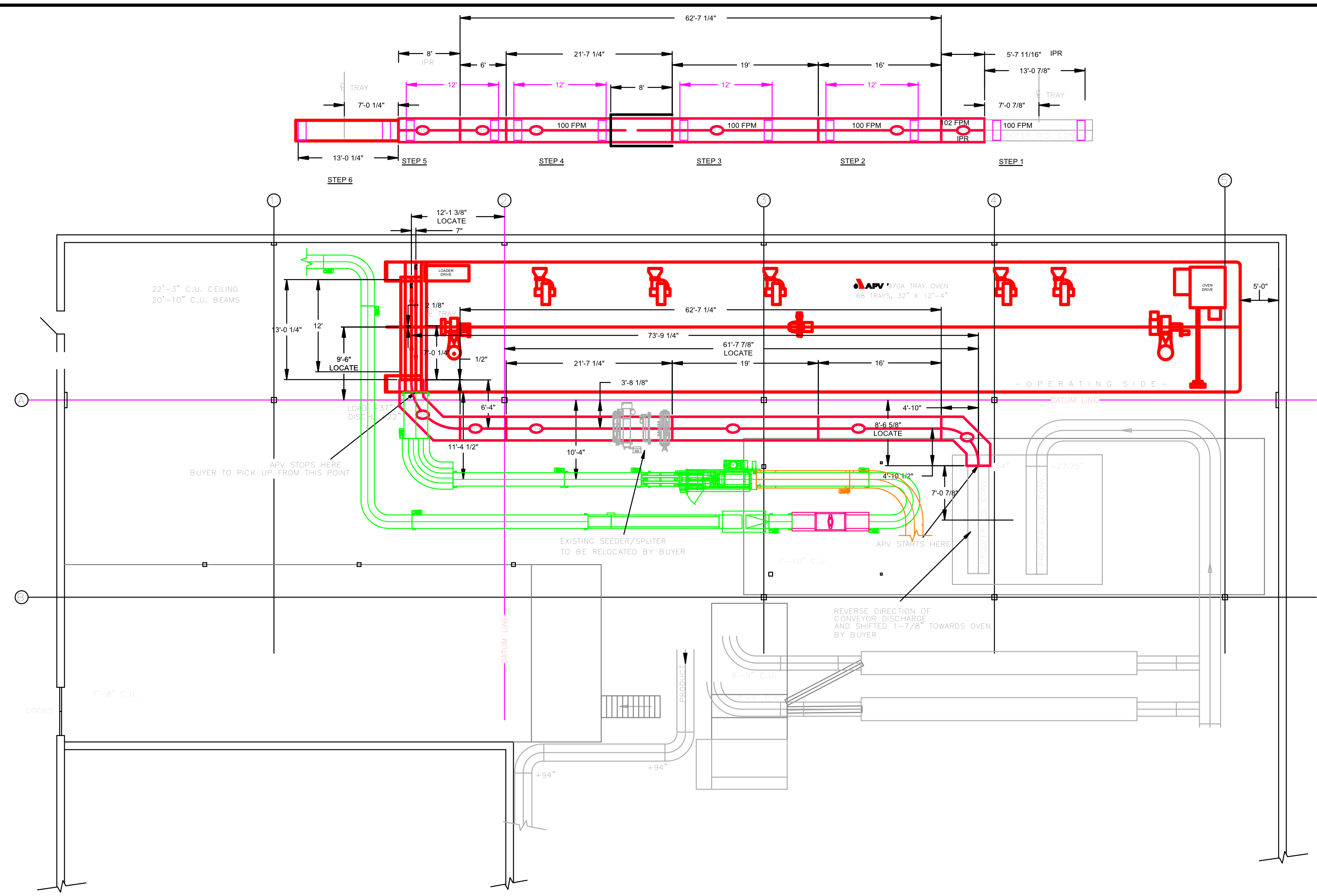
FOUNDATION DRAWING FOR 970 TRAY OVEN
68 TRAY, 32" X 12'-4" - R. H. OPERATING SIDE

SCALE: 1/4"=1'-0"	DATE:	DRAWN BY: GRANTHAM	REF.DWG: 132922

	REVISIONS	DATE	BY
D			
C			
B	SEE SHEET TWO	7/12/2004	GRANTHAM
A	SEE SHEET TWO	7/9/2004	GRANTHAM

132991 1/2 | D


APV BAKER MODEL 970-68 TRAY OVEN
DIRECT GAS FIRED, 32" X 12'-4" TRAYS
BUYER'S REQUIREMENTS FOR INSTALLATION & OPERATION:
OVEN ELECTRICAL SPECIFICATIONS:
PLAN VIEW
SIDE ELEVATION
REAR ELEVATION
FRONT ELEVATION
-OPERATING SIDE-
PRELIMINARY DRAWING
SUBJECT TO FINAL ENGINEERING
H & S BAKERY
BALTIMORE, MARYLAND
CONNECTION DRAWING FOR 970 TRAY OVEN
68 TRAY, 32" X 12'-4" - R. H. OPERATING SIDE
APV Baker Inc, Goldsboro, NC 27533
132991 2/2



CUSTOMER: Notheast Foods												NEW		EXISTING						
LOCATION: H & S Bakery		3/12/04										68 TRAY OVEN		158 TRAY PROOFER						
Baltimore, MD.																				
VARIETY	PAN LENGTH	PAN WIDTH	PCS/ PAN	SCALE WT.	BAKED OUT SCALE WT.	PROOF TIME	BAKE TIME	NEW BAKE TIME Reduced 20%	PCS/MIN CURRENT	PANS/TRAY (@.75 SP)	NEW Pan/Tray Loading	PCS/MINUTE with OVEN NEW BAKE & NEW PAN/TRAY	PANS/MINUTE with OVEN NEW BAKE & NEW PAN/TRAY	PCS/MINUTE EXISTING TRAY PROOFER NEW PAN/ROW	Tray Required to match Oven Production	PCS/MIN MIXER CAPACITY 10000#	PCS/MIN MOULDER CAPACITY	PCS/MIN OVEN CAPACITY	SYSTEM PANS/MIN	SYSTEM PCS/MIN
RAISIN & NO SALT RAISIN	31.00	9.00	5	18.50	16.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	144.1	120	227.7	24.0	120.0
EGG BREAD	31.00	11.13	5	11.00	10.0	60.0	30.0	24.00	115.0	12.18	12	170.0	34.0	158.0	170	242.4	120	170.0	24.0	120.0
100% WHOLE WHEAT	31.00	11.13	5	20.50	18.0	60.0	30.0	24.00	75.0	12.18	12	170.0	34.0	158.0	170	130.1	120	170.0	24.0	120.0
7-GRAIN	29.50	9.63	4	27.00	24.0	60.0	32.0	25.60	75.0	13.95	14	148.8	37.2	147.5	159	98.8	120	148.8	24.7	98.8
12-GRAIN	29.50	9.63	4	27.00	24.0	60.0	32.0	25.60	75.0	13.95	14	148.8	37.2	147.5	159	98.8	120	148.8	24.7	98.8
STONE GROUND	29.50	9.63	4	27.00	24.0	60.0	30.0	24.00	75.0	13.95	14	158.7	39.7	147.5	170	98.8	120	158.7	24.7	98.8
SLICED ITIALIN	31.00	11.75	5	22.50	20.0	60.0	27.0	21.60	80.0	11.58	11	173.1	34.6	144.8	189	118.5	120	173.1	24.7	118.5
1/2 SEEDLESS	30.50	13.00	4	37.50	34.0	60.0	36.0	28.80	50.0	10.53	10	94.4	23.6	105.3	142	71.1	120	94.4	17.8	71.1
1/2 LIGHT	30.50	13.00	4	37.50	34.0	60.0	36.0	28.80	50.0	10.53	10	94.4	23.6	105.3	142	71.1	120	94.4	17.8	71.1
10 OZ DELI	30.50	13.00	4	26.00	24.0	60.0	34.0	27.20	50.0	10.53	10	100.0	25.0	105.3	150	102.6	120	100.0	25.0	100.0
1/2 SOUR DOUGH	29.50	9.63	4	37.50	32.0	60.0	36.0	28.80	50.0	13.95	14	132.2	33.1	147.5	142	71.1	120	132.2	17.8	71.1
SOUR DOUGH	29.50	9.63	4	26.50	24.0	60.0	36.0	28.80	65.0	13.95	14	132.2	33.1	147.5	142	100.6	120	132.2	25.2	100.6
CINNAMON SWIRL	31.00	9.00	5	18.00	16.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	148.1	120	227.7	24.0	120.0
MAPLE SWIRL	31.00	9.00	5	18.00	16.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	148.1	120	227.7	24.0	120.0
WALMART MAPLE SWIRL	31.00	9.00	5	18.50	16.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	144.1	120	227.7	24.0	120.0
WALMART RAISIN	31.00	9.00	5	20.50	18.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	130.1	120	227.7	24.0	120.0
HARVEST BRAN	29.50	9.63	4	27.00	24.0	60.0	32.0	25.60	75.0	13.95	14	148.8	37.2	147.5	159	98.8	120	148.8	24.7	98.8
COUNTRY WHITE	29.50	9.63	4	27.00	24.0	60.0	30.0	24.00	75.0	13.95	14	158.7	39.7	147.5	170	98.8	120	158.7	24.7	98.8
1/2 WHEAT	31.00	13.00	4	37.50	34.0	60.0	36.0	28.80	50.0	10.53	10	94.4	23.6	105.3	142	71.1	120	94.4	17.8	71.1
STONE GROUND "GIANT" # 90	31.00	9.00	5	19.00	16.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	140.4	120	227.7	24.0	120.0
ROUND SOUR ITALIAN	29.50	9.63	3	21.00	18.0	60.0	34.0	27.20	46.0	13.95	14	105.0	35.0	110.6	150	127.0	120	105.0	35.0	105.0
ROUND RYE	29.63	12.38	3	21.00	18.0	60.0	34.0	27.20	46.0	11.02	11	82.5	27.5	86.9	150	127.0	120	82.5	27.5	82.5
ROUND CRACKED WHEAT	29.63	12.38	3	21.00	18.0	60.0	34.0	27.20	46.0	11.02	11	82.5	27.5	86.9	150	127.0	120	82.5	27.5	82.5
ROUND 7-GRAIN	29.63	12.38	3	21.00	18.0	60.0	34.0	27.20	46.0	11.02	11	82.5	27.5	86.9	150	127.0	120	82.5	27.5	82.5
ROUND 6-GRAIN	29.63	12.38	3	21.00	18.0	60.0	34.0	27.20	46.0	11.02	11	82.5	27.5	86.9	150	127.0	120	82.5	27.5	82.5
ROUND RAISIN	29.63	12.38	3	28.00	24.0	60.0	34.0	27.20	42.0	11.02	11	82.5	27.5	86.9	150	95.2	120	82.5	27.5	82.5
RUSSIAN PUMP	29.88	14.25	5	39.00	36.0	60.0	36.0	28.80	36.0	9.65	10	118.1	23.6	131.7	142	68.4	120	118.1	13.7	68.4
MULTIGRAIN	29.88	14.25	5	39.00	36.0	60.0	36.0	28.80	36.0	9.65	10	118.1	23.6	131.7	142	68.4	120	118.1	13.7	68.4
HONEY OAT	29.50	9.63	4	27.00	24.0	60.0	32.0	25.60	75.0	13.95	14	148.8	37.2	147.5	159	98.8	120	148.8	24.7	98.8
MONASTERY	31.00	9.00	5	19.00	16.0	60.0	28.0	22.40	95.0	14.85	15	227.7	45.5	197.5	182	140.4	120	227.7	24.0	120.0
MULTIGRAIN MILTON'S	30.50	13.00	4	44.00	40.0	60.0	32.0	25.60	50.0	10.53	10	106.3	26.6	105.3	159	60.6	120	106.3	15.2	60.6
LITE SEEDED	31.00	11.75	5	37.50	34.0	60.0	40.0	32.00	50.0	11.58	11	116.9	23.4	144.8	128	71.1	120	116.9	14.2	71.1
LITE SEEDLESS	31.00	11.75	5	37.50	34.0	60.0	40.0	32.00	50.0	11.58	11	116.9	23.4	144.8	128	71.1	120	116.9	14.2	71.1
LITE ITALIAN	31.00	11.75	5	18.00	16.0	60.0	32.0	25.60	80.0	11.58	11	146.1	29.2	144.8	159	148.1	120	146.1	24.0	120.0

H & S BAKERY

BALTIMORE, MARYLAND

OVERALL CONNECTION DRAWING FOR 970 TRAY OVEN
68 TRAY, 32" X 12'-4"

SCALE: 1/8"=1'-0"	DATE: 5/10/2004	DRAWN BY: GEHRON	REF.DWG: 132922

	REVISIONS	DATE	BY
D			
C	REVISED OVEN FEED CONVEYORS	6/10/2004	GEHRON
B	REVISED DRAWING SHOWING DIFFERENT SEEDER	5/25/2004	GEHRON
A	RELOCATED OVEN SO IT IS 5'-0" FROM BACK WALL	5/18/2004	GEHRON

This Drawing is and Remains the Property of
APV Baker Inc, Goldsboro, NC 27533

133007 D

Quality Environmental Solutions, Inc.
Mailing Address: P. O. Box 44
Bridgewater, VT 05034

Via email: mdeair.ECR@maryland.gov

March 27, 2024

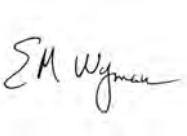
Mr. Scott Thompson
Maryland Department of the Environment
Air & Radiation Management Administration
Air Quality Compliance Program
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720

Re: Emissions Certification Report for Calendar Year 2023
H&S Bakery, Inc.
603 South Bond Street
Baltimore, Maryland 21231
Facility ID # 510-00301

On behalf of H&S Bakery, Inc. and the parent company Northeast Foods, Inc., Quality Environmental Solutions (QES) is pleased to submit the attached 2023 Emissions Certification Report. There were no hazardous air pollutant emissions above the Maryland Department of the Environment plant threshold limits. There were no billable toxic air pollutant emissions.

If you have any questions regarding this Emissions Certification Report, please feel free to contact Andrew Black of Northeast Foods at 410-558-3050 or the undersigned at 410-841-5552.

Sincerely,



Erin M. Wyman
Senior Project Manager

Cc: Andrew Black – NE Foods
Eric Mohrmann – H&S Bakery

Attachment: ***2023 Emissions Certification Report***

MARYLAND DEPARTMENT OF THE ENVIRONMENT
1800 Washington Boulevard, Suite 715 • Baltimore Maryland 21230-1720
410-537-3000 • 1-800-633-6101 • http://www.mde.state.md.us
Air and Radiation Management Administration
Air Quality Compliance Program
410-537-3220

FORM 1:

GENERAL FACILITY INFORMATION
EMISSIONS CERTIFICATION REPORT

Calendar Year: 2023

A. FACILITY IDENTIFICATION	**Do Not Write in This Space**
Facility Name: H&S Bakery, Inc.	Date Received Regional
Address: 603 S. Bond Street	Date Received State
City: Baltimore County: City Zip Code: 21231	AIRS Code
B. Briefly describe the major function of the facility	FINDS Code
Wholesale Bakery	SIC Code
	Facility Number:
	TEMPO ID:
C. SEASONAL PRODUCTION (%, if applicable)	Reviewed by:

Winter (Dec.-Feb.)	Spring (Mar – May)	Summer (Jun – Aug)	Fall (Sept – Nov)
23%	25%	26%	26%

Name Date

D. Explain any increases or decreases in emissions from the previous calendar year for each registration at this facility.

E. CONTROL DEVICE INFORMATION (for NOx and VOC sources only)

Control Device	Capture Efficiency	Removal Efficiency
None		

I am familiar with the facility and the installations and sources for which this report is submitted. I have personally examined the information in this report, which consists of 71 pages (including attachments), and certify that the information is correct to the best of my knowledge.

Andrew J. Black	VP of Engineering	3-27-2024
Name (Print/Type)	Title	Date
Signature		410-558-3050 Telephone

1/09/08

ANNUAL EMISSIONS CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: (signature) _____ Date: 3-27-2024

Andrew J. Black VP of Engineering

EQUIPMENT INVENTORY
EMISSIONS CERTIFICATION REPORT

Equipment Inventory

24-510-0301 H&S Bakery, Inc.

Please Enter Facility ID and Name

Equipment Name	Registration No.	S / F	Fuel			Throughput		Actual Operating Schedule			Estimation Methods
			Type	Amount	Units	Amount	Units	hrs/day	days/wk	days/yr	
BOILER #1	*`5-2213*	S	NG	7630.00	MCF			24	7	182	C3
BOILER #2	*`5-2148*	S	NG	7630.00	MCF			24	7	183	C3
BAKERY OVEN #1	*`8-0278*	S	NG	19075.00	MCF	18972	TONS	24	6	312	C3
BAKERY OVEN #2	*`8-0278*	S	NG	11445.00	MCF	1757	TONS	24	6	312	C3
BAKERY OVEN #3	*`8-0278*	S	NG	11445.00	MCF	8486	TONS	24	6	312	C3
BAKERY OVEN #5	*`8-0278*	S	NG	19075.00	MCF	16060	TONS	24	6	312	C3
Total Usage				76300.00		45275					

FORM 2

CRITERIA POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Criteria Pollutants

24-510-0301 H&S Bakery, Inc.

Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Equipment Name	Registration No.	S / F	Fuel Type	VOC		(TOSD)	NOx		(TOSD)	SOx		CO		Lead		Estimation Methods
				tons/yr	lbs/day	lbs/day	tons/yr	lbs/day	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
BOILER #1	`5-2213	S	NG	2.30E-02	2.30E-01	2.30E-01	3.82E-01	4.19E+00	4.19E+00	2.00E-03	3.00E-02	3.20E-01	3.52E+00	0.00E+00	0.00E+00	C3
BOILER #2	`5-2148	S	NG	2.30E-02	2.30E-01	2.30E-01	3.82E-01	4.17E+00	4.17E+00	2.00E-03	3.00E-02	3.20E-01	3.52E+00	0.00E+00	0.00E+00	C3
BAKERY OVEN #1	`8-0278	S	NG	2.92E+01	1.87E+02	1.97E+02	9.54E-01	6.11E+00	6.41E+00	6.00E-03	4.00E-02	8.01E-01	5.14E+00	0.00E+00	0.00E+00	C3/A9 MDE Form
BAKERY OVEN #2	`8-0278	S	NG	2.45E+00	1.57E+01	1.66E+01	5.72E-01	3.67E+00	3.88E+00	3.00E-03	2.00E-02	4.81E-01	3.08E+00	0.00E+00	0.00E+00	C3/A9 MDE Form
BAKERY OVEN #3	`8-0278	S	NG	1.09E+01	6.96E+01	7.44E+01	5.72E-01	3.67E+00	3.92E+00	3.00E-03	2.00E-02	4.81E-01	3.08E+00	0.00E+00	0.00E+00	C3/A9 MDE Form
BAKERY OVEN #5	`8-0278	S	NG	2.88E+01	1.84E+02	1.83E+02	9.54E-01	6.11E+00	6.06E+00	6.00E-03	4.00E-02	8.01E-01	5.14E+00	0.00E+00	0.00E+00	C3/A9 MDE Form
Total Emissions				7.14E+01	4.58E+02	4.71E+02	3.82E+00	2.79E+01	2.86E+01	2.20E-02	1.80E-01	3.20E+00	2.35E+01	0.00E+00	0.00E+00	

PARTICULATE MATTER
EMISSIONS CERTIFICATION REPORT

24-510-0301 H&S Bakery, Inc.

Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Particulate Matter (PM)
Pollutant

Equipment Name	Registration No.	S / F	Fuel Type	PM - Filterable		PM 10 - Filterable		PM 2.5 - Filterable		PM - Condensable		Estimation Methods
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
BOILER #1	`5-2213	S	NG	7.00E-03	8.00E-02	7.00E-03	8.00E-02	7.00E-03	8.00E-02	2.20E-02	2.40E-01	C3
BOILER #2	`5-2148	S	NG	7.00E-03	8.00E-02	7.00E-03	8.00E-02	7.00E-03	8.00E-02	2.20E-02	2.40E-01	C3
BAKERY OVEN #1	`8-0278	S	NG	1.80E-02	1.20E-01	1.80E-02	1.20E-01	1.80E-02	1.20E-01	5.40E-02	3.50E-01	C3
BAKERY OVEN #2	`8-0278	S	NG	1.10E-02	7.00E-02	1.10E-02	7.00E-02	1.10E-02	7.00E-02	3.30E-02	2.10E-01	C3
BAKERY OVEN #3	`8-0278	S	NG	1.10E-02	7.00E-02	1.10E-02	7.00E-02	1.10E-02	7.00E-02	3.30E-02	2.10E-01	C3
BAKERY OVEN #5	`8-0278	S	NG	1.80E-02	1.20E-01	1.80E-02	1.20E-01	1.80E-02	1.20E-01	5.40E-02	3.50E-01	C3
Total Emissions				7.20E-02	5.40E-01	7.20E-02	5.40E-01	7.20E-02	5.40E-01	2.18E-01	1.60E+00	

FORM 4

REPORTABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Reportable Toxics
Pollutant

24-510-0301 H&S Bakery, Inc.

Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Equipment Name	Registration No.	S / F	Fuel Type	Pollutant	CASRN	Actual Emissions			Control Device	Efficiency (%)	Estimation Method
						tons/yr	lbs/day	lbs/hr			
				*SEE ATTACHED							
		NONE ABOVE MDE PLANT THRESHOLD VALUES									

Pollutant Totals	fill in these two columns		tons/yr	lbs/day	lbs/hr
Total Toxics	-		0.00E+00	0.00E+00	0.00E+00

CALENDAR YEAR: 2023

2023 Natural Gas Emissions Data - Hazardous Air Pollutants
H&S Bakery

Total Natural Gas Usage	**76,300**

HAP with AP-42 Emission Factor	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Lbs/Year	Tons/Year	Operational Days	Lbs/Day	Lbs/Hour	MDE Plant Threshold Lbs/Hour	MDE Plant Threshold Tons/Year
2-methylnaphthalene	2.4E-05	76.30	0.00	0.000	365	0.00	0.00	--	--
3-methylchloranthrene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
7,12-dimethylbenz(a)anthracene	1.6E-05	76.30	0.00	0.000	365	0.00	0.00	--	--
Acenaphthene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Acenaphthylene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Anthracene	2.4E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Benzo(a)anthracene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Benzene	2.1E-03	76.30	0.16	0.000	365	0.00	0.00	0.01	0.1
Benzo(a)pyrene	1.2E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Benzo(b)fluoranthene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Benzo(g,h,i)perylene	1.2E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Benzo(k)fluoranthene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Chrysene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Dibenzo(a,h)anthracene	1.2E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Dichlorobenzene	1.2E-03	76.30	0.09	0.000	365	0.00	0.00	--	--
Fluoranthene	3.0E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Fluorene	2.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Formaldehyde	7.5E-02	76.30	5.72	0.003	365	0.02	0.0007	0.001	0.01
Hexane	1.8E+00	76.30	137.34	0.069	365	0.38	0.02	1	10
Indeno(1,2,3-cd)pyrene	1.8E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Naphthalene	6.1E-04	76.30	0.05	0.000	365	0.00	0.00	0.1	1
Phenanathrene	1.7E-05	76.30	0.00	0.000	365	0.00	0.00	--	--
Pyrene	5.0E-06	76.30	0.00	0.000	365	0.00	0.00	--	--
Toluene	3.4E-03	76.30	0.26	0.000	365	0.00	0.00	1	10
Arsenic	2.0E-04	76.30	0.02	0.0000	365	0.00	0.0000	0.0001	0.0001
Beryllium	1.2E-05	76.30	0.00	0.0000	365	0.00	0.00000	0.00001	0.0001
Cadmium	1.1E-03	76.30	0.08	0.0000	365	0.00	0.0000	0.0001	0.0001
Chromium	1.4E-03	76.30	0.11	0.000	365	0.00	0.000	0.001	0.01
Cobalt	8.4E-05	76.30	0.01	0.000	365	0.00	0.0000	0.0001	0.001
Manganese	3.8E-04	76.30	0.03	0.000	365	0.00	0.000	0.001	0.01
Mercury	2.6E-04	76.30	0.02	0.000	365	0.00	0.0000	0.0001	0.001
Nickel	2.1E-03	76.30	0.16	0.000	365	0.00	0.000	0.001	0.001
Selenium	2.4E-05	76.30	0.00	0.000	365	0.00	0.000	0.001	0.01
Zinc (MD TAP, Not a HAP)	2.9E-02	76.30	2.21	0.001	365	0.01	0.00	0.01	0.1

BILLABLE TOXIC AIR POLLUTANTS
EMISSIONS CERTIFICATION REPORT

Billable TAPs

24-510-0301 H&S Bakery, Inc.

Pollutant

Chemical Name	CAS Number	Actual Emissions			Estimation Method
		tons/yr	lbs/day	lbs/hr	
carbon disulfide	75-15-0				
carbonyl sulfide	463-58-1				
chlorine	7782-50-5				
cyanide compounds	57-12-5				
hydrochloric acid	7647-01-0				
hydrogen fluoride	7664-39-3		NONE		
methyl chloroform	71-55-6				
methylene chloride	75-09-2				
perchloroethylene	127-18-4				
phosphine	7803-51-2				
titanium tetrachloride	7550-45-0				

*if any amount of emissions are reported for these compounds, please also include the emissions broken down by equipment number in Form 4

PLEASE NOTE: Be sure to attach all data and calculations necessary to support the emissions figures shown above.
See Attachment 1 for minimum reporting values.
This form to include only the eleven chemicals identified.

FORM 6

GREENHOUSE GASES
EMISSIONS CERTIFICATION REPORT

Greenhouse Gases
Pollutant

24-510-0301 H&S Bakery, Inc.

Please Enter Facility ID and Name in Equipment Inventory Spreadsheet

Equipment Name	Registration No.	S / F	Fuel Type	CO_2		CH_4		N_2O		HFCs		PFCs		SF_6		Estimation Methods
				tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	tons/yr	lbs/day	
BOILER #1	`5-2213	S	NG	4.58E+02	5.03E+03	9.00E-03	1.00E-01	8.00E-03	9.00E-02							C3
BOILER #2	`5-2148	S	NG	4.58E+02	5.03E+03	9.00E-03	1.00E-01	8.00E-03	9.00E-02							C3
BAKERY OVEN #1	`8-0278	S	NG	1.15E+03	7.34E+03	2.20E-02	1.40E-01	2.10E-02	1.30E-01							C3
BAKERY OVEN #2	`8-0278	S	NG	6.87E+02	4.40E+03	1.30E-02	8.00E-02	1.30E-02	8.00E-02							C3
BAKERY OVEN #3	`8-0278	S	NG	6.87E+02	4.40E+03	1.30E-02	8.00E-02	1.30E-02	8.00E-02							C3
BAKERY OVEN #5	`8-0278	S	NG	1.15E+03	7.34E+03	2.20E-02	1.40E-01	2.10E-02	1.30E-01							C3
Total Emissions				4.58E+03	3.35E+04	8.80E-02	6.40E-01	8.40E-02	6.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

2023 H&S Bakery Production Data (pounds)

Month	Line 1	Line 2	Line 3	Line 5	Totals	Quarterly Totals	%
Jan	2,527,884	272,969	1,298,963	2,833,474	6,933,291		
Feb	2,589,431	277,478	1,315,326	2,424,775	6,607,010	20,971,482	23%
Mar	3,092,524	277,794	1,342,712	2,718,151	7,431,181		
Apr	3,603,639	382,031	1,584,722	2,859,411	8,429,803		
May	3,084,969	312,698	1,204,222	2,733,444	7,335,333	22,430,088	25%
Jun	3,118,523	248,409	1,237,729	2,060,291	6,664,952		
Jul	2,872,837	313,259	1,810,815	2,958,990	7,955,902		
Aug	3,401,411	268,496	1,322,112	2,240,263	7,232,282	23,971,128	26%
Sep	3,930,828	352,611	1,645,655	2,853,851	8,782,944		
Oct	3,144,455	275,747	1,375,600	2,705,929	7,501,730		
Nov	2,872,837	271,451	1,176,825	2,675,210	6,996,323	23,178,894	26%
Dec	3,705,569	261,401	1,658,270	3,055,601	8,680,841		
Total Pounds	37,944,908	3,514,345	16,972,950	32,119,389	90,551,592		100%
Total Tons	**18,972**	**1,757**	**8,486**	**16,060**	**45,276**		
% of Total (April - Sept)	**52.7%**	**53.4%**	**51.9%**	**48.9%**			

2023 H&S Bakery Ethanol Emissions

Month	Line 1 Ethanol (pounds)	Line 2 Ethanol (pounds)	Line 3 Ethanol (pounds)	Line 5 Ethanol (pounds)
Jan	3,928	372	1,552	5,072
Feb	3,982	376	1,571	4,155
Mar	4,859	377	1,579	5,199
Apr	5,514	521	1,974	5,359
May	4,804	426	1,644	4,698
Jun	4,771	339	1,655	3,907
Jul	4,399	428	2,524	5,433
Aug	5,167	366	1,712	4,050
Sep	5,960	472	2,062	5,035
Oct	4,849	371	1,677	4,834
Nov	4,399	394	1,677	4,636
Dec	5,750	390	2,034	5,078
Total Pounds	58,381	4,831	21,661	57,455
Total Tons	**29.19**	**2.42**	**10.83**	**28.73**
% of Total (April - Sept)	**52.4%**	**52.8%**	**53.4%**	**49.6%**

Natural Gas Data - 2023
H&S Bakery

Natural Gas Usage

Unit	MCF
Total	*76,300*
Boiler #1	7,630
Boiler #2	7,630
Bread Oven #1	19,075
Bread Oven #2	11,445
Bread Oven #3	11,445
Bread Oven #5	19,075

Boiler #1 Emissions

Constituent	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Pounds/Year	Tons/Year	Operational Days	Pounds/Day
SOX	0.6	7.63	4.58	0.002	182	0.03
NOX	100	7.63	763.00	0.382	182	4.19
CO	84	7.63	640.92	0.320	182	3.52
Pb	0.0005	7.63	0.00	0.000	182	0.00
VOC	5.5	7.63	41.97	0.021	182	0.23
$PM_{Primary}$	7.6	7.63	57.99	0.029	182	0.32
$PM_{Filterable}$	1.9	7.63	14.50	0.007	182	0.08
$PM_{Condensable}$	5.7	7.63	43.49	0.022	182	0.24
CO_2	120,000	7.63	915,600	458	182	5,031
CH_4	2.3	7.63	17.55	0.009	182	0.10
N_2O	2.2	7.63	16.79	0.008	182	0.09

Boiler #2 Emissions

Constituent	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Pounds/Year	Tons/Year	Operational Days	Pounds/Day
SOX	0.6	7.63	4.58	0.002	183	0.03
NOX	100	7.63	763.00	0.382	183	4.17
CO	84	7.63	640.92	0.320	183	3.50
Pb	0.0005	7.63	0.00	0.000	183	0.00
VOC	5.5	7.63	41.97	0.021	183	0.23
$PM_{Primary}$	7.6	7.63	57.99	0.029	183	0.32
$PM_{Filterable}$	1.9	7.63	14.50	0.007	183	0.08
$PM_{Condensable}$	5.7	7.63	43.49	0.022	183	0.24
CO_2	120,000	7.63	915,600	458	183	5,003
CH_4	2.3	7.63	17.55	0.009	183	0.10
N_2O	2.2	7.63	16.79	0.008	183	0.09

Bread Oven #1 Emissions

Constituent	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Pounds/Year	Tons/Year	Operational Days	Pounds/Day
SOX	0.6	19.08	11.45	0.006	312	0.04
NOX	100	19.08	1,907.50	0.954	312	6.11
CO	84	19.08	1,602.30	0.801	312	5.14
Pb	0.0005	19.08	0.01	0.000	312	0.00
VOC	5.5	19.08	104.91	0.052	312	0.34
$PM_{Primary}$	7.6	19.08	144.97	0.072	312	0.46
$PM_{Filterable}$	1.9	19.08	36.24	0.018	312	0.12
$PM_{Condensable}$	5.7	19.08	108.73	0.054	312	0.35
CO_2	120,000	19.08	2,289,000	1,145	312	7,337
CH_4	2.3	19.08	43.87	0.022	312	0.14
N_2O	2.2	19.08	41.97	0.021	312	0.13

Bread Oven #2 Emissions

Constituent	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Pounds/Year	Tons/Year	Operational Days	Pounds/Day
SOX	0.6	11.45	6.87	0.003	312	0.02
NOX	100	11.45	1,144.50	0.572	312	3.67
CO	84	11.45	961.38	0.481	312	3.08
Pb	0.0005	11.45	0.01	0.000	312	0.00
VOC	5.5	11.45	62.95	0.031	312	0.20
$PM_{Primary}$	7.6	11.45	86.98	0.043	312	0.28
$PM_{Filterable}$	1.9	11.45	21.75	0.011	312	0.07
$PM_{Condensable}$	5.7	11.45	65.24	0.033	312	0.21
CO_2	120,000	11.45	1,373,400	687	312	4,402
CH_4	2.3	11.45	26.32	0.013	312	0.08
N_2O	2.2	11.45	25.18	0.013	312	0.08

Bread Oven #3 Emissions

Constituent	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Pounds/Year	Tons/Year	Operational Days	Pounds/Day
SOX	0.6	11.45	6.87	0.003	312	0.02
NOX	100	11.45	1,144.50	0.572	312	3.67
CO	84	11.45	961.38	0.481	312	3.08
Pb	0.0005	11.45	0.01	0.000	312	0.00
VOC	5.5	11.45	62.95	0.031	312	0.20
$PM_{Primary}$	7.6	11.45	86.98	0.043	312	0.28
$PM_{Filterable}$	1.9	11.45	21.75	0.011	312	0.07
$PM_{Condensable}$	5.7	11.45	65.24	0.033	312	0.21
CO_2	120,000	11.45	1,373,400	687	312	4,402
CH_4	2.3	11.45	26.32	0.013	312	0.08
N_2O	2.2	11.45	25.18	0.013	312	0.08

Bread Oven #5 Emissions

Constituent	AP-42 Factor	Natural Gas Quantity (millions of cubic feet)	Pounds/Year	Tons/Year	Operational Days	Pounds/Day
SOX	0.6	19.08	11.45	0.006	312	0.04
NOX	100	19.08	1,907.50	0.954	312	6.11
CO	84	19.08	1,602.30	0.801	312	5.14
Pb	0.0005	19.08	0.01	0.000	312	0.00
VOC	5.5	19.08	104.91	0.052	312	0.34
$PM_{Primary}$	7.6	19.08	144.97	0.072	312	0.46
$PM_{Filterable}$	1.9	19.08	36.24	0.018	312	0.12
$PM_{Condensable}$	5.7	19.08	108.73	0.054	312	0.35
CO_2	120,000	19.08	2,289,000	1,145	312	7,337
CH_4	2.3	19.08	43.87	0.022	312	0.14
N_2O	2.2	19.08	41.97	0.021	312	0.13

Total Emissions

Constituent	Pounds/Year	Tons/Year	Pounds/Day
SOX	45.78	0.023	0.17
NOX	7,630.00	3.815	27.93
CO	6,409.20	3.205	23.46
Pb	0.04	0.000	0.00
VOC	419.65	0.210	1.54
$PM_{Primary}$	579.88	0.290	2.12
$PM_{Filterable}$	144.97	0.072	0.53
$PM_{Condensable}$	434.91	0.217	1.59
CO_2	9,156,000	4,578	33,511
CH_4	175.49	0.088	0.64
N_2O	167.86	0.084	0.61

LINE # 1 **Jan-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	511,115	256	921
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	56,790	28	102
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,303,691	652	2,002
647 Italian	2.68	1.8	4.8	2.54	141,974	71	180
647 White	3.00	1.8	5.4	2.81	514,314	257	721
647 Wheat	3.00	1.8	5.4	2.81	0	0	0
647 Multigrain	3.75	1.8	6.8	3.38	0	0	0
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.1**		**2,527,884**	**1,264**	**3,928**

LINE # 1 **Feb-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	502,147	251	905
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,280,068	640	1,966
647 Italian	2.68	1.8	4.8	2.54	271,187	136	344
647 White	3.00	1.8	5.4	2.81	424,742	212	596
647 Wheat	3.00	1.8	5.4	2.81	60,321	30	85
647 Multigrain	3.75	1.8	6.8	3.38	50,965	25	86
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.0**		**2,589,431**	**1,295**	**3,982**

LINE # 1 **Mar-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	484,213	242	873
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,257,922	629	1,932
647 Italian	2.68	1.8	4.8	2.54	205,783	103	261
647 White	3.00	1.8	5.4	2.81	491,199	246	689
647 Wheat	3.00	1.8	5.4	2.81	276,596	138	388
647 Multigrain	3.75	1.8	6.8	3.38	229,344	115	388
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	147,466	74	328
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.2**		**3,092,524**	**1,546**	**4,859**

LINE # 1 **Apr-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	654,585	327	1,180
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,340,602	670	2,059
647 Italian	2.68	1.8	4.8	2.54	473,779	237	601
647 White	3.00	1.8	5.4	2.81	502,756	251	705
647 Wheat	3.00	1.8	5.4	2.81	311,907	156	437
647 Multigrain	3.75	1.8	6.8	3.38	251,828	126	426
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	68,183	34	105
TOTAL			**6.0**		**3,603,639**	**1,802**	**5,514**

LINE # 1 **May-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	533,532	267	962
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,331,743	666	2,045
647 Italian	2.68	1.8	4.8	2.54	194,616	97	247
647 White	3.00	1.8	5.4	2.81	469,529	235	659
647 Wheat	3.00	1.8	5.4	2.81	266,297	133	373
647 Multigrain	3.75	1.8	6.8	3.38	235,339	118	398
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	53,912	27	120
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.1**		**3,084,969**	**1,542**	**4,804**

LINE # 1 **Jun-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	478,807	239	863
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,301,686	651	1,999
647 Italian	2.68	1.8	4.8	2.54	365,696	183	464
647 White	3.00	1.8	5.4	2.81	475,463	238	667
647 Wheat	3.00	1.8	5.4	2.81	259,517	130	364
647 Multigrain	3.75	1.8	6.8	3.38	215,155	108	364
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	22,199	11	49
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.0**		**3,118,523**	**1,559**	**4,771**

LINE # 1 **Jul-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	504,756	252	910
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	43,597	22	55
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,109,195	555	1,704
647 Italian	2.68	1.8	4.8	2.54	283,242	142	359
647 White	3.00	1.8	5.4	2.81	468,516	234	657
647 Wheat	3.00	1.8	5.4	2.81	242,857	121	341
647 Multigrain	3.75	1.8	6.8	3.38	220,675	110	373
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.0**		**2,872,837**	**1,436**	**4,399**

LINE # 1 **Aug-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	498,765	249	899
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,496,124	748	2,298
647 Italian	2.68	1.8	4.8	2.54	443,189	222	562
647 White	3.00	1.8	5.4	2.81	546,602	273	767
647 Wheat	3.00	1.8	5.4	2.81	220,921	110	310
647 Multigrain	3.75	1.8	6.8	3.38	195,810	98	331
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**5.9**		**3,401,411**	**1,701**	**5,167**

LINE # 1 **Sep-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	557,178	279	1,004
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,650,895	825	2,536
647 Italian	2.68	1.8	4.8	2.54	494,839	247	628
647 White	3.00	1.8	5.4	2.81	742,614	371	1,042
647 Wheat	3.00	1.8	5.4	2.81	244,424	122	343
647 Multigrain	3.75	1.8	6.8	3.38	240,877	120	407
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**5.9**		**3,930,828**	**1,965**	**5,960**

LINE # 1 **Oct-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	516,738	258	932
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,090,986	545	1,676
647 Italian	2.68	1.8	4.8	2.54	423,196	212	537
647 White	3.00	1.8	5.4	2.81	508,356	254	713
647 Wheat	3.00	1.8	5.4	2.81	275,760	138	387
647 Multigrain	3.75	1.8	6.8	3.38	237,769	119	402
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	1,777	1	3
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	89,874	45	200
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.0**		**3,144,455**	**1,572**	**4,849**

LINE # 1 **Nov-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	504,756	252	910
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Stuffing Bread	2.70	1.8	4.9	2.54	43,597	22	55
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,109,195	555	1,704
647 Italian	2.68	1.8	4.8	2.54	283,242	142	359
647 White	3.00	1.8	5.4	2.81	468,516	234	657
647 Wheat	3.00	1.8	5.4	2.81	242,857	121	341
647 Multigrain	3.75	1.8	6.8	3.38	220,675	110	373
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	0	0	0
Sesame Italian	3.35	1.8	6.0	3.07	0	0	0
TOTAL			**6.0**		**2,872,837**	**1,436**	**4,399**

LINE # 1 **Dec-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
P. Farms Italian	4.00	1.8	7.2	3.61	587,134	294	1,058
P. Farms Seeded Italian	4.00	1.8	7.2	3.61	0	0	0
Half Dark-25	2.70	1.8	4.9	2.54	0	0	0
Swirl-112	1.75	1.8	3.2	1.78	0	0	0
Low Cal Seedless-3	7.00	1.8	12.6	6.01	0	0	0
16-oz Italian 113	4.69	1.8	8.4	4.14	0	0	0
Deli Rye-23	5.70	1.8	10.3	4.94	0	0	0
Sliced Italian 69	3.35	1.8	6.0	3.07	1,436,947	718	2,207
647 Italian	2.68	1.8	4.8	2.54	443,189	222	562
647 White	3.00	1.8	5.4	2.81	596,003	298	836
647 Wheat	3.00	1.8	5.4	2.81	239,723	120	336
647 Multigrain	3.75	1.8	6.8	3.38	264,188	132	447
20oz White	3.30	1.8	5.9	3.03	0	0	0
Split Top Wheat	2.01	1.8	3.6	2.00	0	0	0
Potato Bread	3.30	1.8	5.9	3.03	0	0	0
LB White	4.80	1.8	8.6	4.23	0	0	0
100% Whole Wheat	5.10	1.8	9.2	4.45	130,868	65	291
Sesame Italian	3.35	1.8	6.0	3.07	7,517	4	12
TOTAL			**6.1**		**3,705,569**	**1,853**	**5,750**

2023 H&S Bakery Production and Ethanol Emissions Data - Line 1

Month	Product (pounds)	Product (tons)	Ethanol (pounds)	Ethanol (tons)	Average Yt Value
Jan	2,527,884	1,264	3,928	1.96	6.1
Feb	2,589,431	1,295	3,982	1.99	6.0
Mar	3,092,524	1,546	4,859	2.43	6.2
Apr	3,603,639	1,802	5,514	2.76	6.0
May	3,084,969	1,542	4,804	2.40	6.1
Jun	3,118,523	1,559	4,771	2.39	6.0
Jul	2,872,837	1,436	4,399	2.20	6.0
Aug	3,401,411	1,701	5,167	2.58	5.9
Sep	3,930,828	1,965	5,960	2.98	5.9
Oct	3,144,455	1,572	4,849	2.42	6.0
Nov	2,872,837	1,436	4,399	2.20	6.0
Dec	3,705,569	1,853	5,750	2.87	6.1
Totals	**37,944,908**	**18,972**	**58,381**	**29.19**	**6.0**
% of Total (April - September)			**52.4%**		

H&S Line 1 - 12 Month Rolling Inventory

Month	Production (tons)	12-Month Rolling Inventory (tons)	Average Yt Value	12-Month Rolling Average Yt Value
Jan-19	1,398		7.2	
Feb-19	1,329		7.2	
Mar-19	1,407		6.8	
Apr-19	1,469		6.4	
May-19	1,445		7.8	
Jun-19	1,801		7.6	
Jul-19	1,438		7.7	
Aug-19	1,786		7.6	
Sep-19	1,383		7.5	
Oct-19	1,418		7.4	
Nov-19	1,771		7.4	
Dec-19	1,169	17,815	7.7	7.4
Jan-20	1,491	17,908	6.6	7.3
Feb-20	1,888	18,467	6.7	7.3
Mar-20	1,726	18,786	6.2	7.2
Apr-20	1,499	18,815	6.2	7.2
May-20	1,709	19,079	6.0	7.1
Jun-20	1,368	18,646	6.2	6.9
Jul-20	1,277	18,484	6.1	6.8
Aug-20	328	17,027	5.6	6.6
Sep-20	1,441	17,085	5.9	6.5
Oct-20	1,727	17,394	5.9	6.4
Nov-20	1,391	17,013	5.9	6.3
Dec-20	1,401	17,245	6.0	6.1
Jan-21	1,853	17,608	7.0	6.1
Feb-21	1,439	17,160	6.1	6.1
Mar-21	1,399	16,832	6.1	6.1
Apr-21	1,168	16,502	5.6	6.0
May-21	1,565	16,358	6.3	6.1
Jun-21	1,023	16,013	5.7	6.0
Jul-21	1,202	15,938	5.8	6.0
Aug-21	1,244	16,853	6.3	6.1
Sep-21	1,216	16,629	6.2	6.1
Oct-21	1,666	16,568	6.1	6.1
Nov-21	1,210	16,387	6.2	6.1
Dec-21	1,145	16,130	6.3	6.1
Jan-22	1,543	15,820	6.2	6.1
Feb-22	1,203	15,583	6.3	6.1
Mar-22	1,084	15,269	6.3	6.1
Apr-22	1,174	15,274	6.3	6.2
May-22	913	14,622	6.2	6.2
Jun-22	972	14,572	6.2	6.2
Jul-22	1,380	14,750	6.1	6.2
Aug-22	1,153	14,659	6.2	6.2
Sep-22	1,181	14,623	6.1	6.2
Oct-22	1,428	14,385	6.1	6.2
Nov-22	1,135	14,309	6.0	6.2
Dec-22	1,550	14,715	6.2	6.2
Jan-23	1,264	14,436	6.1	6.2
Feb-23	1,295	14,528	6.0	6.2
Mar-23	1,546	14,990	6.2	6.1
Apr-23	1,802	15,618	6.0	6.1
May-23	1,542	16,248	6.1	6.1
Jun-23	1,559	16,835	6.0	6.1
Jul-23	1,436	16,891	6.0	6.1
Aug-23	1,701	17,439	5.9	6.1
Sep-23	1,965	18,224	5.9	6.1
Oct-23	1,572	18,368	6.0	6.0
Nov-23	1,436	18,670	6.0	6.0
Dec-23	1,853	18,972	6.1	6.0

LINE # 2 **Jan-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	44,728	22	67
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	25,564	13	24
9 inch 42	4.00	1.3	5.2	2.72	8,741	4	12
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	106,462	53	154
Subs 29	4.36	1.3	5.7	2.89	23,769	12	34
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	11,201	6	9
6" White Wheat	4.00	1.3	5.2	2.72	52,503	26	71
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.3**		**272,969**	**136**	**372**

LINE # 2 **Feb-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	46,964	23	70
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	6,208	3	7
Italian Rolls 28	2.68	1.3	3.5	1.92	23,008	12	22
9 inch 42	4.00	1.3	5.2	2.72	8,742	4	12
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	106,105	53	154
Subs 29	4.36	1.3	5.7	2.89	23,049	12	33
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	14,092	7	11
6" White Wheat	4.00	1.3	5.2	2.72	49,310	25	67
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.2**		**277,478**	**139**	**376**

LINE # 2 **Mar-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	45,846	23	68
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	26,295	13	25
9 inch 42	4.00	1.3	5.2	2.72	9,834	5	13
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	107,891	54	156
Subs 29	4.36	1.3	5.7	2.89	27,730	14	40
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	13,369	7	10
6" White Wheat	4.00	1.3	5.2	2.72	46,828	23	64
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.2**		**277,794**	**139**	**377**

LINE # 2 **Apr-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	77,528	39	116
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	729	0	1
Italian Rolls 28	2.68	1.3	3.5	1.92	32,138	16	31
9 inch 42	4.00	1.3	5.2	2.72	12,748	6	17
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	156,835	78	227
Subs 29	4.36	1.3	5.7	2.89	34,213	17	50
7 inch 42	4.00	1.3	5.2	2.72	2,550	1	3
French Bread	2.00	1.3	2.6	1.56	20,235	10	16
6" White Wheat	4.00	1.3	5.2	2.72	45,054	23	61
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.3**		**382,031**	**191**	**521**

LINE # 2 **May-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	57,028	29	85
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	28,486	14	27
9 inch 42	4.00	1.3	5.2	2.72	10,198	5	14
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	117,894	59	171
Subs 29	4.36	1.3	5.7	2.89	36,734	18	53
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	15,176	8	12
6" White Wheat	4.00	1.3	5.2	2.72	47,182	24	64
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.3**		**312,698**	**156**	**426**

LINE # 2 **Jun-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	45,084	23	67
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	25,743	13	25
9 inch 42	4.00	1.3	5.2	2.72	9,546	5	13
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	113,615	57	164
Subs 29	4.36	1.3	5.7	2.89	25,517	13	37
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	11,728	6	9
6" White Wheat	4.00	1.3	5.2	2.72	17,176	9	23
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.3**		**248,409**	**124**	**339**

LINE # 2 **Jul-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	63,991	32	95
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	30,589	15	29
9 inch 42	4.00	1.3	5.2	2.72	10,743	5	15
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	148,392	74	215
Subs 29	4.36	1.3	5.7	2.89	26,213	13	38
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	16,728	8	13
6" White Wheat	4.00	1.3	5.2	2.72	16,604	8	23
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.3**		**313,259**	**157**	**428**

LINE # 2 **Aug-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	50,096	25	75
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	26,631	13	26
9 inch 42	4.00	1.3	5.2	2.72	8,520	4	12
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	126,613	63	183
Subs 29	4.36	1.3	5.7	2.89	26,213	13	38
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	14,497	7	11
6" White Wheat	4.00	1.3	5.2	2.72	15,926	8	22
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.3**		**268,496**	**134**	**366**

LINE # 2 **Sep-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	56,312	28	84
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	40,306	20	39
9 inch 42	4.00	1.3	5.2	2.72	9,261	5	13
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	133,627	67	193
Subs 29	4.36	1.3	5.7	2.89	36,182	18	52
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	23,047	12	18
6" White Wheat	4.00	1.3	5.2	2.72	53,876	27	73
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.2**		**352,611**	**176**	**472**

LINE # 2 **Oct-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0.00
Oyster Bay 45	10.72	1.3	13.9	6.58	0	0	0.00
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0.00
All Kaisers - 65	4.50	1.3	5.9	2.98	45,343	23	67.63
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0.00
Blunts 31	3.35	1.3	4.4	2.32	0	0	0.00
Italian Rolls 28	2.68	1.3	3.5	1.92	25,693	13	24.61
9 inch 42	4.00	1.3	5.2	2.72	8,169	4	11.09
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0.00
Juniors 29	4.36	1.3	5.7	2.89	104,639	52	151.41
Subs 29	4.36	1.3	5.7	2.89	20,340	10	29.43
7 inch 42	4.00	1.3	5.2	2.72	8,169	4	11.09
French Bread	2.00	1.3	2.6	1.56	17,552	9	13.69
6" White Wheat	4.00	1.3	5.2	2.72	45,841	23	62.26
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0.00
			0.0	0.00	0	0	0.00
			0.0	0.00	0	0	0.00
			0.0	0.00	0	0	0.00
			0.0	0.00	0	0	0.00
			0.0	0.00	0	0	0.00
TOTAL			**5.2**		**275,747**	**138**	**371.22**

LINE # 2 **Nov-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	20,559	10	16
Oyster Bay 45	10.72	1.3	13.9	6.58	21,759	11	72
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	38,760	19	58
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	26,416	13	25
9 inch 42	4.00	1.3	5.2	2.72	8,168	4	11
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	85,042	43	123
Subs 29	4.36	1.3	5.7	2.89	25,147	13	36
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	16,058	8	13
6" White Wheat	4.00	1.3	5.2	2.72	29,542	15	40
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.7**		**271,451**	**136**	**394**

LINE # 2 **Dec-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Italian (unsliced) 27	2.00	1.3	2.6	1.56	0	0	0
Oyster Bay 45	10.72	1.3	13.9	6.58	23,234	12	76
TB White Wheat Hoagie	2.00	1.3	2.6	1.56	0	0	0
All Kaisers - 65	4.50	1.3	5.9	2.98	39,126	20	58
Italian Subs 17	4.36	1.3	5.7	2.89	0	0	0
Blunts 31	3.35	1.3	4.4	2.32	0	0	0
Italian Rolls 28	2.68	1.3	3.5	1.92	28,586	14	27
9 inch 42	4.00	1.3	5.2	2.72	10,397	5	14
8 inch Wheat 35	3.35	1.3	4.4	2.32	0	0	0
Juniors 29	4.36	1.3	5.7	2.89	74,689	37	108
Subs 29	4.36	1.3	5.7	2.89	22,928	11	33
7 inch 42	4.00	1.3	5.2	2.72	0	0	0
French Bread	2.00	1.3	2.6	1.56	22,034	11	17
6" White Wheat	4.00	1.3	5.2	2.72	40,408	20	55
Pepperidge Farms	3.00	1.3	3.9	2.14	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
			0.0	0.00	0	0	0
TOTAL			**5.8**		**261,401**	**131**	**390**

2023 H&S Bakery Production and Ethanol Emissions Data - Line 2

Month	Product (pounds)	Product (tons)	Ethanol (pounds)	Ethanol (tons)	Average Yt Value
Jan	272,969	136	372	0.19	5.3
Feb	277,478	139	376	0.19	5.2
Mar	277,794	139	377	0.19	5.2
Apr	382,031	191	521	0.26	5.3
May	312,698	156	426	0.21	5.3
Jun	248,409	124	339	0.17	5.3
Jul	313,259	157	428	0.21	5.3
Aug	268,496	134	366	0.18	5.3
Sep	352,611	176	472	0.24	5.2
Oct	275,747	138	371	0.19	5.2
Nov	271,451	136	394	0.20	5.7
Dec	261,401	131	390	0.19	5.8
Totals	**3,514,345**	**1,757**	**4,831**	**2.42**	**5.3**
% of Total (April - September)			**52.8%**		

H&S Line 2 - 12 Month Rolling Inventory

Month	Production (tons)	12-Month Rolling Inventory (tons)	Average Yt Value	12-Month Rolling Average Yt Value
Jan-19	158		5.1	
Feb-19	158		5.1	
Mar-19	216		5.1	
Apr-19	173		5.2	
May-19	179		5.1	
Jun-19	198		5.2	
Jul-19	167		5.2	
Aug-19	211		5.1	
Sep-19	203		5.1	
Oct-19	175		5.2	
Nov-19	199		5.2	
Dec-19	118	2,156	5.2	5.2
Jan-20	143	2,141	5.2	5.2
Feb-20	201	2,183	5.2	5.2
Mar-20	144	2,110	5.3	5.2
Apr-20	98	2,035	5.3	5.2
May-20	168	2,024	5.4	5.2
Jun-20	143	1,969	5.4	5.2
Jul-20	148	1,950	5.4	5.2
Aug-20	158	1,896	5.3	5.3
Sep-20	193	1,886	5.2	5.3
Oct-20	199	1,909	5.3	5.3
Nov-20	139	1,850	5.2	5.3
Dec-20	137	1,868	5.1	5.3
Jan-21	170	1,896	5.3	5.3
Feb-21	142	1,838	5.2	5.3
Mar-21	164	1,858	5.2	5.3
Apr-21	160	1,920	5.3	5.3
May-21	204	1,957	5.3	5.3
Jun-21	117	1,931	5.3	5.2
Jul-21	261	2,044	5.4	5.2
Aug-21	267	2,153	5.4	5.3
Sep-21	314	2,274	5.4	5.3
Oct-21	349	2,424	5.4	5.3
Nov-21	246	2,531	5.4	5.3
Dec-21	239	2,633	5.4	5.3
Jan-22	168	2,630	5.3	5.3
Feb-22	152	2,640	5.2	5.3
Mar-22	151	2,628	5.3	5.3
Apr-22	199	2,667	5.3	5.3
May-22	175	2,638	5.3	5.3
Jun-22	182	2,702	5.2	5.3
Jul-22	193	2,634	5.3	5.3
Aug-22	153	2,520	5.3	5.3
Sep-22	170	2,376	5.2	5.3
Oct-22	208	2,235	5.2	5.3
Nov-22	143	2,131	5.3	5.3
Dec-22	175	2,067	5.3	5.2
Jan-23	136	2,036	5.3	5.3
Feb-23	139	2,023	5.2	5.3
Mar-23	139	2,010	5.2	5.3
Apr-23	191	2,002	5.3	5.3
May-23	156	1,983	5.3	5.3
Jun-23	124	1,926	5.3	5.3
Jul-23	157	1,890	5.3	5.3
Aug-23	134	1,871	5.3	5.3
Sep-23	176	1,878	5.2	5.3
Oct-23	138	1,808	5.2	5.3
Nov-23	136	1,801	5.7	5.3
Dec-23	131	1,757	5.8	5.3

H&S BAKERY

LINE # 3 **Jan-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,364	3	8
Swats	6.37	1.0	6.4	3.21	55,733	28	89
Horns	6.37	1.0	6.4	3.21	13,496	7	22
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	14,215	7	30
Corn Dusters	9.05	1.0	9.1	4.41	4,076	2	9
Nardones	2.70	1.0	2.7	1.60	5,398	3	4
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	92,629	46	190
White Wheat Nardone	2.70	1.0	2.7	1.60	257,513	129	207
4.5 Premium Potato	6.70	1.0	6.7	3.38	18,192	9	31
CFA Multigrain	5.36	1.0	5.4	2.76	0	0	0
Popeye's Brioche	4.50	1.0	4.5	2.40	605,196	303	728
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	124,286	62	111
4.5" Brioche	4.35	1.0	4.4	2.32	89,550	45	104
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	11,663	6	18
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	600	0	1
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	1,052	1	1
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.5**		**1,298,963**	**649**	**1,552**

H&S BAKERY

LINE # 3 **Feb-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	4,291	2	7
Swats	6.37	1.0	6.4	3.21	49,789	25	80
Horns	6.37	1.0	6.4	3.21	9,497	5	15
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	15,738	8	34
Corn Dusters	9.05	1.0	9.1	4.41	11,209	6	25
Nardones	2.70	1.0	2.7	1.60	5,398	3	4
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	77,808	39	159
White Wheat Nardone	2.70	1.0	2.7	1.60	250,477	125	201
4.5 Premium Potato	6.70	1.0	6.7	3.38	18,743	9	32
CFA Multigrain	5.36	1.0	5.4	2.76	0	0	0
Popeye's Brioche	4.50	1.0	4.5	2.40	649,082	325	780
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	131,481	66	117
4.5" Brioche	4.35	1.0	4.4	2.32	62,296	31	72
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	25,918	13	40
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	3,599	2	6
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.5**		**1,315,326**	**658**	**1,571**

H&S BAKERY

LINE # 3 **Mar-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	3,755	2	6
Swats	6.37	1.0	6.4	3.21	68,366	34	110
Horns	6.37	1.0	6.4	3.21	25,071	13	40
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	16,246	8	35
Corn Dusters	9.05	1.0	9.1	4.41	4,585	2	10
Nardones	2.70	1.0	2.7	1.60	0	0	0
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	97,570	49	200
White Wheat Nardone	2.70	1.0	2.7	1.60	365,865	183	294
4.5 Premium Potato	6.70	1.0	6.7	3.38	15,435	8	26
CFA Multigrain	5.36	1.0	5.4	2.76	0	0	0
Popeye's Brioche	4.50	1.0	4.5	2.40	506,100	253	609
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	138,023	69	123
4.5" Brioche	4.35	1.0	4.4	2.32	75,924	38	88
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	23,974	12	37
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	1,799	1	3
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.4**		**1,342,712**	**671**	**1,579**

H&S BAKERY

LINE # 3 **Apr-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,901	3	9
Swats	6.37	1.0	6.4	3.21	96,605	48	155
Horns	6.37	1.0	6.4	3.21	55,484	28	89
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	26,398	13	56
Corn Dusters	9.05	1.0	9.1	4.41	15,287	8	34
Nardones	2.70	1.0	2.7	1.60	0	0	0
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	150,675	75	308
White Wheat Nardone	2.70	1.0	2.7	1.60	288,469	144	231
4.5 Premium Potato	6.70	1.0	6.7	3.38	23,704	12	40
CFA Multigrain	5.36	1.0	5.4	2.76	0	0	0
Popeye's Brioche	4.50	1.0	4.5	2.40	548,570	274	660
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	212,594	106	189
4.5" Brioche	4.35	1.0	4.4	2.32	120,049	60	139
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	34,988	17	54
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	5,998	3	9
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.7**		**1,584,722**	**792**	**1,974**

H&S BAKERY

LINE # 3 **May-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,364	3	8
Swats	6.37	1.0	6.4	3.21	63,908	32	102
Horns	6.37	1.0	6.4	3.21	16,496	8	26
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	14,722	7	31
Corn Dusters	9.05	1.0	9.1	4.41	23,439	12	52
Nardones	2.70	1.0	2.7	1.60	10,797	5	9
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	114,242	57	234
White Wheat Nardone	2.70	1.0	2.7	1.60	34,476	17	28
4.5 Premium Potato	6.70	1.0	6.7	3.38	16,537	8	28
CFA Multigrain	5.36	1.0	5.4	2.76	201,310	101	278
Popeye's Brioche	4.50	1.0	4.5	2.40	445,934	223	536
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	16,872	8	58
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	146,526	73	131
4.5" Brioche	4.35	1.0	4.4	2.32	53,859	27	62
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	34,341	17	53
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	5,398	3	8
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**5.3**		**1,204,222**	**602**	**1,644**

H&S BAKERY

LINE # 3 **Jun-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,243	3	8
Swats	6.37	1.0	6.4	3.21	64,084	32	103
Horns	6.37	1.0	6.4	3.21	17,483	9	28
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	16,722	8	36
Corn Dusters	9.05	1.0	9.1	4.41	10,196	5	22
Nardones	2.70	1.0	2.7	1.60	0	0	0
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	81,752	41	167
White Wheat Nardone	2.70	1.0	2.7	1.60	0	0	0
4.5 Premium Potato	6.70	1.0	6.7	3.38	19,383	10	33
CFA Multigrain	5.36	1.0	5.4	2.76	412,710	206	570
Popeye's Brioche	4.50	1.0	4.5	2.40	375,500	188	452
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	156,278	78	139
4.5" Brioche	4.35	1.0	4.4	2.32	60,526	30	70
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	14,253	7	22
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	3,598	2	6
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**5.1**		**1,237,729**	**619**	**1,655**

H&S BAKERY

LINE # 3 **Jul-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,063	3	8
Swats	6.37	1.0	6.4	3.21	81,426	41	130
Horns	6.37	1.0	6.4	3.21	32,439	16	52
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	24,780	12	53
Corn Dusters	9.05	1.0	9.1	4.41	13,765	7	30
Nardones	2.70	1.0	2.7	1.60	0	0	0
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	120,482	60	247
White Wheat Nardone	2.70	1.0	2.7	1.60	183,480	92	147
4.5 Premium Potato	6.70	1.0	6.7	3.38	29,511	15	50
CFA Multigrain	5.36	1.0	5.4	2.76	318,872	159	440
Popeye's Brioche	4.50	1.0	4.5	2.40	316,794	158	381
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	24,871	12	85
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	189,548	95	169
4.5" Brioche	4.35	1.0	4.4	2.32	86,816	43	101
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	49,204	25	76
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	14,894	7	23
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	318,872	159	532
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**5.4**		**1,810,815**	**905**	**2,524**

H&S BAKERY

LINE # 3 **Aug-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,062	3	8
Swats	6.37	1.0	6.4	3.21	76,944	38	123
Horns	6.37	1.0	6.4	3.21	17,467	9	28
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	21,240	11	45
Corn Dusters	9.05	1.0	9.1	4.41	13,766	7	30
Nardones	2.70	1.0	2.7	1.60	0	0	0
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	2,039	1	3
Onion Rolls	8.38	1.0	8.4	4.09	108,682	54	222
White Wheat Nardone	2.70	1.0	2.7	1.60	207,413	104	166
4.5 Premium Potato	6.70	1.0	6.7	3.38	21,158	11	36
CFA Multigrain	5.36	1.0	5.4	2.76	47,793	24	66
Popeye's Brioche	4.50	1.0	4.5	2.40	482,199	241	580
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	19,635	10	67
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	158,828	79	142
4.5" Brioche	4.35	1.0	4.4	2.32	69,844	35	81
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	17,481	9	27
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	4,767	2	7
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	47,793	24	80
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.9**		**1,322,112**	**661**	**1,712**

H&S BAKERY

LINE # 3 **Sep-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,063	3	8
Swats	6.37	1.0	6.4	3.21	83,667	42	134
Horns	6.37	1.0	6.4	3.21	25,951	13	42
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	29,332	15	63
Corn Dusters	9.05	1.0	9.1	4.41	14,275	7	31
Nardones	2.70	1.0	2.7	1.60	47,320	24	38
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	23,600	12	36
Onion Rolls	8.38	1.0	8.4	4.09	121,724	61	249
White Wheat Nardone	2.70	1.0	2.7	1.60	260,595	130	209
4.5 Premium Potato	6.70	1.0	6.7	3.38	18,374	9	31
CFA Multigrain	5.36	1.0	5.4	2.76	63,476	32	88
Popeye's Brioche	4.50	1.0	4.5	2.40	534,064	267	642
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	21,598	11	39
4" Brioche	3.10	1.0	3.1	1.78	207,849	104	185
4.5" Brioche	4.35	1.0	4.4	2.32	85,510	43	99
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	35,608	18	55
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	4,171	2	6
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	63,476	32	106
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.7**		**1,645,655**	**823**	**2,062**

H&S BAKERY

LINE # 3 **Oct-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	3,038	2	5
Swats	6.37	1.0	6.4	3.21	62,003	31	99
Horns	6.37	1.0	6.4	3.21	26,450	13	42
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	20,735	10	44
Corn Dusters	9.05	1.0	9.1	4.41	24,983	12	55
Nardones	2.70	1.0	2.7	1.60	49,647	25	40
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	81,357	41	167
White Wheat Nardone	2.70	1.0	2.7	1.60	162,207	81	130
4.5 Premium Potato	6.70	1.0	6.7	3.38	11,693	6	20
CFA Multigrain	5.36	1.0	5.4	2.76	17,176	9	24
Popeye's Brioche	4.50	1.0	4.5	2.40	688,956	344	828
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	150,331	75	134
4.5" Brioche	4.35	1.0	4.4	2.32	77,024	39	89
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	0	0	0
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	0	0	0
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.6**		**1,375,600**	**688**	**1,677**

H&S BAKERY

LINE # 3 **Nov-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	2,025	1	3
Swats	6.37	1.0	6.4	3.21	56,774	28	91
Horns	6.37	1.0	6.4	3.21	19,963	10	32
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	18,711	9	40
Corn Dusters	9.05	1.0	9.1	4.41	9,177	5	20
Nardones	2.70	1.0	2.7	1.60	5,431	3	4
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	60,241	30	123
White Wheat Nardone	2.70	1.0	2.7	1.60	228,686	114	183
4.5 Premium Potato	6.70	1.0	6.7	3.38	13,920	7	24
CFA Multigrain	5.36	1.0	5.4	2.76	0	0	0
Popeye's Brioche	4.50	1.0	4.5	2.40	515,141	258	619
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	146,410	73	130
4.5" Brioche	4.35	1.0	4.4	2.32	78,982	39	91
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	21,364	11	33
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	0	0	0
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.4**		**1,176,825**	**588**	**1,395**

H&S BAKERY

LINE # 3 **Dec-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Large Multigrain	6.00	1.0	6.0	3.07	5,062	3	8
Swats	6.37	1.0	6.4	3.21	53,039	27	85
Horns	6.37	1.0	6.4	3.21	20,462	10	33
Dinner Rolls	3.70	1.0	3.7	2.05	0	0	0
Potato Sesame	9.05	1.0	9.1	4.41	0	0	0
Potato Deli	8.71	1.0	8.7	4.27	18,712	9	40
Corn Dusters	9.05	1.0	9.1	4.41	10,706	5	24
Nardones	2.70	1.0	2.7	1.60	5,431	3	4
Giant Soft Kaiser	3.89	1.0	3.9	2.09	0	0	0
Red Robin Buns	5.69	1.0	5.7	2.89	0	0	0
4.5" Split Top Corn Roll	6.03	1.0	6.0	3.07	0	0	0
White Corn Duster	6.03	1.0	6.0	3.07	0	0	0
Onion Rolls	8.38	1.0	8.4	4.09	73,282	37	150
White Wheat Nardone	2.70	1.0	2.7	1.60	215,390	108	173
4.5 Premium Potato	6.70	1.0	6.7	3.38	17,261	9	29
CFA Multigrain	5.36	1.0	5.4	2.76	0	0	0
Popeye's Brioche	4.50	1.0	4.5	2.40	852,962	426	1,026
White Wheat Rolls	5.69	1.0	5.7	2.89	0	0	0
4.5" Wheatberry	14.50	1.0	14.5	6.85	0	0	0
4" Multigrain Rolls	7.37	1.0	7.4	3.65	0	0	0
4" Brioche	3.10	1.0	3.1	1.78	152,293	76	136
4.5" Brioche	4.35	1.0	4.4	2.32	84,205	42	98
Mini Brioche	3.00	1.0	3.0	1.74	0	0	0
4.5" Sourdough	6.60	1.0	6.6	3.34	0	0	0
4.5" Deli Roll (67)	6.00	1.0	6.0	3.07	148,871	74	229
4.5" Crown (63)	8.10	1.0	8.1	4.01	0	0	0
4.5"Corn Duster Crown	6.00	1.0	6.0	3.07	596	0	1
4.5"Seeded Crown	8.10	1.0	8.1	4.01	0	0	0
4.5 Toasted Sesame	6.00	1.0	6.0	3.07	0	0	0
4.5" Burger Buns	6.00	1.0	6.0	3.07	0	0	0
4.5"Red Robin Wheat	3.90	1.0	3.9	2.14	0	0	0
4.5" Potato Hams	3.90	1.0	3.9	2.14	0	0	0
TB White Wheat Kais.	3.90	1.0	3.9	2.14	0	0	0
McDonald's	11.39	1.0	11.4	5.43	0	0	0
CFA Brioche	6.60	1.0	6.6	3.34	0	0	0
	11.39	1.0	11.4	5.43	0	0	0
TOTAL			**4.6**		**1,658,270**	**829**	**2,034**

2023 H&S Bakery Production and Ethanol Emissions Data - Line 3

Month	Product (pounds)	Product (tons)	Ethanol (pounds)	Ethanol (tons)	Average Yt Value
Jan	1,298,963	649	1,552	0.78	4.5
Feb	1,315,326	658	1,571	0.79	4.5
Mar	1,342,712	671	1,579	0.79	4.4
Apr	1,584,722	792	1,974	0.99	4.7
May	1,204,222	602	1,644	0.82	5.3
Jun	1,237,729	619	1,655	0.83	5.1
Jul	1,810,815	905	2,524	1.26	5.4
Aug	1,322,112	661	1,712	0.86	4.9
Sep	1,645,655	823	2,062	1.03	4.7
Oct	1,375,600	688	1,677	0.84	4.6
Nov	1,176,825	588	1,677	0.84	4.4
Dec	1,658,270	829	2,034	1.02	4.6
Totals	**16,972,950**	**8,486**	**21,661**	**10.83**	**4.8**
% of Total (April - September)			**53.4%**		

H&S Line 3 - 12 Month Rolling Inventory

Month	Production (tons)	12-Month Rolling Inventory (tons)	Average Yt Value	12-Month Rolling Average Yt Value
Jan-19	530		5.2	
Feb-19	559		5.5	
Mar-19	658		5.3	
Apr-19	554		5.7	
May-19	467		6.4	
Jun-19	855		6.9	
Jul-19	700		6.5	
Aug-19	803		5.1	
Sep-19	693		5.2	
Oct-19	641		5.0	
Nov-19	938		4.7	
Dec-19	500	7,898	4.8	5.5
Jan-20	652	8,021	4.8	5.5
Feb-20	790	8,251	4.9	5.4
Mar-20	644	8,237	5.0	5.4
Apr-20	581	8,264	5.1	5.4
May-20	805	8,602	5.3	5.3
Jun-20	661	8,408	5.3	5.1
Jul-20	633	8,341	5.1	5.0
Aug-20	828	8,366	5.0	5.0
Sep-20	647	8,321	5.0	5.0
Oct-20	756	8,436	4.8	5.0
Nov-20	652	8,150	4.7	5.0
Dec-20	617	8,266	4.9	5.0
Jan-21	872	8,485	4.7	5.0
Feb-21	694	8,389	4.8	5.0
Mar-21	655	8,401	4.9	5.0
Apr-21	357	8,177	6.4	5.1
May-21	725	8,097	5.2	5.1
Jun-21	629	8,065	5.1	5.1
Jul-21	720	8,151	5.0	5.0
Aug-21	615	7,938	4.9	5.0
Sep-21	663	7,954	4.9	5.0
Oct-21	829	8,027	4.7	5.0
Nov-21	628	8,003	4.7	5.0
Dec-21	622	8,008	4.6	5.0
Jan-22	779	7,915	4.6	5.0
Feb-22	644	7,865	4.5	5.0
Mar-22	673	7,884	4.5	4.9
Apr-22	874	8,400	4.6	4.8
May-22	667	8,342	4.8	4.7
Jun-22	593	8,306	4.9	4.7
Jul-22	788	8,375	4.8	4.7
Aug-22	633	8,393	4.9	4.7
Sep-22	549	8,279	4.8	4.7
Oct-22	673	8,123	4.7	4.7
Nov-22	596	8,091	4.6	4.7
Dec-22	773	8,242	4.6	4.7
Jan-23	649	8,113	4.5	4.7
Feb-23	658	8,127	4.5	4.7
Mar-23	671	8,125	4.4	4.7
Apr-23	792	8,044	4.7	4.7
May-23	602	7,979	5.3	4.7
Jun-23	619	8,005	5.1	4.7
Jul-23	905	8,122	5.4	4.8
Aug-23	661	8,150	4.9	4.8
Sep-23	823	8,423	4.7	4.8
Oct-23	688	8,438	4.6	4.8
Nov-23	588	8,430	4.4	4.8
Dec-23	829	8,486	4.6	4.8

H&S BAKERY

LINE # 5 **Jan-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	122,931	61	211
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	96,958	48	209
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	499,229	250	1,033
100% Whole Wheat-85	6.00	1.2	7.2	3.61	102,678	51	185
Ultimate Whole Grain	7.71	1.2	9.3	4.49	327,606	164	736
Country White-103	4.69	1.2	5.6	2.89	22,523	11	33
647 White Bread	5.50	1.2	6.6	3.34	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.60	1.2	6.7	3.38	877,369	439	1,484
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	30,835	15	31
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	79,305	40	111
20 oz White	5.50	1.2	6.6	3.34	0	0	0
Schmidt 1lb White	6.00	1.2	7.2	3.61	0	0	0
Amazin Raisin - 2	5.80	1.2	7.0	3.47	36,802	18	64
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	143,079	72	210
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	117,069	59	177
Half Seeded	6.60	1.2	7.9	3.92	184,536	92	361
Half Dark	3.30	1.2	4.0	2.14	89,875	45	96
Swirl	4.07	1.2	4.9	2.54	102,678	51	130
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.2**		**2,833,474**	**1,417**	**5,072**

H&S BAKERY

LINE # 5 **Feb-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	5.80	1.2	7.0	3.47	69,905	35	121
Ultimate 12 Grain-71	6.10	1.2	7.3	3.65	446,154	223	814
100% Whole Wheat-85	5.70	1.2	6.8	3.43	0	0	0
Ultimate Whole Grain	5.80	1.2	7.0	3.47	288,790	144	501
Country White-103	4.69	1.2	5.6	2.89	124,570	62	180
647 White Bread	5.90	1.2	7.1	3.52	37,842	19	67
647 Wheat Bread	5.30	1.2	6.4	3.21	0	0	0
647 Italian Bread	5.80	1.2	7.0	3.47	717,847	359	1,246
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	9,504	5	17
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	73,640	37	103
20 oz White	6.80	1.2	8.2	4.01	0	0	0
Schmidt 1lb White	6.80	1.2	8.2	4.01	0	0	0
Amazin Raisin - 2	7.10	1.2	8.5	4.18	33,602	17	70
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	12,094	6	19
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	110,926	55	163
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	117,069	59	177
Half Seeded	6.60	1.2	7.9	3.92	189,268	95	371
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	0	0	0
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	81,845	41	126
22oz split Top Wheat	4.79	1.2	5.7	2.94	82,759	41	122
PF Italian	6.70	1.2	8.0	3.96	28,959	14	57
PF Seeded Italian	5.80	1.2	7.0	3.47	0	0	0
TOTAL			**6.8**		**2,424,775**	**1,212**	**4,155**

H&S BAKERY

LINE # 5 **Mar-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	172,533	86	372
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	476,008	238	985
100% Whole Wheat-85	6.00	1.2	7.2	3.61	0	0	0
Ultimate Whole Grain	7.71	1.2	9.3	4.49	312,079	156	701
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.90	1.2	7.1	3.52	127,848	64	225
647 Wheat Bread	6.70	1.2	8.0	3.96	40,646	20	80
647 Italian Bread	5.80	1.2	7.0	3.47	816,750	408	1,418
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	69,392	35	97
20 oz White	7.10	1.2	8.5	4.18	0	0	0
Schmidt 1lb White	6.80	1.2	8.2	4.01	32,176	16	64
Amazin Raisin - 2	6.20	1.2	7.4	3.69	32,002	16	59
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	5.90	1.2	7.1	3.52	0	0	0
21 Grain	4.79	1.2	5.7	2.94	133,435	67	196
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	142,381	71	216
Half Seeded	6.60	1.2	7.9	3.92	192,422	96	377
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	0	0	0
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	86,309	43	217
PF Seeded Italian	7.80	1.2	9.4	4.54	84,169	42	191
TOTAL			**7.7**		**2,718,151**	**1,359**	**5,199**

H&S BAKERY

LINE # 5 **Apr-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	281,109	141	607
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	548,987	274	1,136
100% Whole Wheat-85	6.00	1.2	7.2	3.61	104,166	52	188
Ultimate Whole Grain	7.71	1.2	9.3	4.49	357,107	179	803
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.90	1.2	7.1	3.52	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.50	1.2	6.6	3.34	934,796	467	1,560
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	4.80	1.2	5.8	2.94	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	80,722	40	113
20 oz White	6.20	1.2	7.4	3.69	0	0	0
Schmidt 1lb White	6.30	1.2	7.6	3.74	0	0	0
Amazin Raisin - 2	7.10	1.2	8.5	4.18	38,403	19	80
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	139,865	70	205
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	150,290	75	227
Half Seeded	6.60	1.2	7.9	3.92	223,967	112	439
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	0	0	0
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.5**		**2,859,411**	**1,430**	**5,359**

H&S BAKERY

LINE # 5 **May-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	104,116	52	225
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	490,937	245	1,016
100% Whole Wheat-85	6.00	1.2	7.2	3.61	87,797	44	158
Ultimate Whole Grain	5.80	1.2	7.0	3.47	312,079	156	542
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	157,352	79	273
647 Wheat Bread	6.70	1.2	8.0	3.96	65,876	33	130
647 Italian Bread	5.20	1.2	6.2	3.16	839,085	420	1,326
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	65,145	33	91
20 oz White	5.70	1.2	6.8	3.43	0	0	0
Schmidt 1lb White	5.80	1.2	7.0	3.47	0	0	0
Amazin Raisin - 2	5.90	1.2	7.1	3.52	28,802	14	51
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	120,572	60	177
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	123,287	62	187
Half Seeded	6.60	1.2	7.9	3.92	159,300	80	312
Half Dark	3.30	1.2	4.0	2.14	87,797	44	94
Swirl	4.07	1.2	4.9	2.54	91,301	46	116
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**6.9**		**2,733,444**	**1,367**	**4,698**

H&S BAKERY

LINE # 5 **Jun-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	198,486	99	428
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	444,849	222	921
100% Whole Wheat-85	6.00	1.2	7.2	3.61	0	0	0
Ultimate Whole Grain	7.71	1.2	9.3	4.49	289,997	145	652
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.70	1.2	6.8	3.43	608,063	304	1,042
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	78,226	39	110
20 oz White	5.40	1.2	6.5	3.25	0	0	0
Schmidt 1lb White	5.50	1.2	6.6	3.34	0	0	0
Amazin Raisin - 2	6.10	1.2	7.3	3.65	30,860	15	56
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	107,216	54	158
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	116,412	58	176
Half Seeded	6.60	1.2	7.9	3.92	186,181	93	365
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	0	0	0
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.7**		**2,060,291**	**1,030**	**3,907**

H&S BAKERY

LINE # 5 **Jul-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	185,915	93	401
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	554,005	277	1,146
100% Whole Wheat-85	6.00	1.2	7.2	3.61	92,165	46	166
Ultimate Whole Grain	7.71	1.2	9.3	4.49	353,725	177	795
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	141,110	71	245
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.70	1.2	6.8	3.43	861,386	431	1,476
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	67,672	34	95
20 oz White	5.40	1.2	6.5	3.25	0	0	0
Schmidt 1lb White	5.20	1.2	6.2	3.16	0	0	0
Amazin Raisin - 2	5.80	1.2	7.0	3.47	34,563	17	60
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	133,603	67	196
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	144,574	72	219
Half Seeded	6.60	1.2	7.9	3.92	200,470	100	393
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	92,165	46	117
Low Cal Seedless	4.02	1.2	4.8	2.54	97,637	49	124
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.4**		**2,958,990**	**1,479**	**5,433**

H&S BAKERY

LINE # 5 **Aug-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	103,625	52	224
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	469,915	235	972
100% Whole Wheat-85	6.00	1.2	7.2	3.61	87,557	44	158
Ultimate Whole Grain	7.71	1.2	9.3	4.49	283,280	142	637
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.90	1.2	7.1	3.52	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.40	1.2	6.5	3.25	626,463	313	1,018
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	72,183	36	101
20 oz White	5.80	1.2	7.0	3.47	0	0	0
Schmidt 1lb White	5.70	1.2	6.8	3.43	0	0	0
Amazin Raisin - 2	5.90	1.2	7.1	3.52	27,979	14	49
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	111,337	56	164
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	114,052	57	173
Half Seeded	6.60	1.2	7.9	3.92	171,602	86	336
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	87,557	44	111
Low Cal Seedless	4.02	1.2	4.8	2.54	84,715	42	108
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.3**		**2,240,263**	**1,120**	**4,050**

H&S BAKERY

LINE # 5 **Sep-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
647 Potato	5.70	1.2	6.8	3.43	56,533	28	97
Walmart Raisin	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	126,483	63	273
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	530,921	265	1,099
100% Whole Wheat-85	6.00	1.2	7.2	3.61	0	0	0
Ultimate Whole Grain	6.20	1.2	7.4	3.69	343,232	172	634
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.60	1.2	6.7	3.38	879,714	440	1,488
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	56,685	28	57
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	73,686	37	103
20 oz White	5.40	1.2	6.5	3.25	0	0	0
Schmidt 1lb White	5.60	1.2	6.7	3.38	0	0	0
Amazin Raisin - 2	5.80	1.2	7.0	3.47	39,501	20	69
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	195,635	98	287
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	149,392	75	226
Half Seeded	6.60	1.2	7.9	3.92	213,299	107	418
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	0	0	0
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	98,310	49	151
22oz split Top Wheat	4.79	1.2	5.7	2.94	90,458	45	133
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.1**		**2,853,851**	**1,427**	**5,035**

H&S BAKERY

LINE # 5 **Oct-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
Potato Bread-54	5.70	1.2	6.8	3.43	0	0	0
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	480,026	240	1,036
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	402,313	201	833
100% Whole Wheat-85	6.00	1.2	7.2	3.61	84,485	42	152
Ultimate Whole Grain	5.10	1.2	6.1	3.12	269,790	135	420
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.60	1.2	6.7	3.38	659,786	330	1,116
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	0	0	0
Split Top Wheat	6.03	1.2	7.2	3.61	169,331	85	305
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	60,153	30	84
20 oz White	5.50	1.2	6.6	3.34	0	0	0
Schmidt 1lb White	5.50	1.2	6.6	3.34	0	0	0
Amazin Raisin - 2	5.80	1.2	7.0	3.47	31,271	16	54
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	124,060	62	182
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	110,840	55	168
Half Seeded	6.60	1.2	7.9	3.92	147,545	74	289
Half Dark	3.30	1.2	4.0	2.14	84,485	42	90
Swirl	4.07	1.2	4.9	2.54	81,844	41	104
Low Cal Seedless	4.02	1.2	4.8	2.54	0	0	0
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**7.2**		**2,705,929**	**1,353**	**4,834**

H&S BAKERY

LINE # 5 **Nov-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
OMC Awesome White	5.70	1.2	6.8	3.43	39,259	20	67
Raisin Bread-62	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	230,107	115	497
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	395,718	198	819
100% Whole Wheat-85	6.00	1.2	7.2	3.61	0	0	0
Ultimate Whole Grain	5.80	1.2	7.0	3.47	268,291	134	466
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	0	0	0
647 Wheat Bread	6.70	1.2	8.0	3.96	156,049	78	309
647 Italian Bread	5.20	1.2	6.2	3.16	628,129	314	993
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	73,690	37	74
Split Top Wheat	6.03	1.2	7.2	3.61	0	0	0
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	51,131	26	72
20 oz White	5.70	1.2	6.8	3.43	249,491	125	428
Schmidt 1lb White	5.80	1.2	7.0	3.47	0	0	0
Amazin Raisin - 2	5.90	1.2	7.1	3.52	32,917	16	58
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	0	0	0
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	125,651	63	185
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	109,234	55	165
Half Seeded	6.60	1.2	7.9	3.92	150,753	75	295
Half Dark	3.30	1.2	4.0	2.14	0	0	0
Swirl	4.07	1.2	4.9	2.54	82,948	41	105
Low Cal Seedless	4.02	1.2	4.8	2.54	81,842	41	104
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**6.9**		**2,675,210**	**1,338**	**4,636**

H&S BAKERY

LINE # 5 **Dec-23** PRODUCT	PERCENT OF YEAST	FERMENT TIME (HRS)	AIB YT VALUE	PREDICTED #'S ETHANOL PER TON PRODUCT	LBS. OF PRODUCT	TONS OF DOUGH	TOTAL #'S ETHANOL PER MONTH
100% Sprouted Wheat	5.70	1.2	6.8	3.43	0	0	0
Awesome White	4.36	1.2	5.2	2.72	0	0	0
Sliced Italian-170	7.37	1.2	8.8	4.32	242,298	121	523
Ultimate 12 Grain-71	7.04	1.2	8.4	4.14	333,063	167	689
100% Whole Wheat-85	6.00	1.2	7.2	3.61	0	0	0
Ultimate Whole Grain	5.80	1.2	7.0	3.47	349,228	175	606
Country White-103	4.69	1.2	5.6	2.89	0	0	0
647 White Bread	5.80	1.2	7.0	3.47	0	0	0
647 Rye Bread	6.70	1.2	8.0	3.96	0	0	0
647 Italian Bread	5.20	1.2	6.2	3.16	741,425	371	1,172
All Nat. Multigrain-125	3.02	1.2	3.6	2.00	187,593	94	188
Split Top Wheat	6.03	1.2	7.2	3.61	87,861	44	158
Cinn Swirl w/ Raisin	4.02	1.2	5.4	2.81	67,672	34	95
20 oz White	5.70	1.2	6.8	3.43	249,491	125	428
Schmidt 1lb White	5.80	1.2	7.0	3.47	0	0	0
Amazin Raisin - 2	5.90	1.2	7.1	3.52	39,501	20	69
Aldi Raisin - 162	5.03	1.2	6.0	3.07	0	0	0
16 oz Sliced Italian 113	4.36	1.2	5.2	2.72	0	0	0
20oz Whole Wheat	5.03	1.2	6.0	3.07	55,288	28	85
Maple Bread	9.38	1.2	11.3	5.38	0	0	0
21 Grain	4.79	1.2	5.7	2.94	160,643	80	236
Deli	4.79	1.2	5.7	2.94	0	0	0
Half Seedless	4.94	1.2	5.9	3.03	133,328	67	202
Half Seeded	6.60	1.2	7.9	3.92	184,431	92	361
Half Dark	3.30	1.2	4.0	2.14	93,702	47	100
Swirl	4.07	1.2	4.9	2.54	103,380	52	131
Low Cal Seedless	4.02	1.2	4.8	2.54	26,696	13	34
8 Grain	5.00	1.2	6.0	3.07	0	0	0
22oz split Top Wheat	4.79	1.2	5.7	2.94	0	0	0
PF Italian	8.71	1.2	10.5	5.03	0	0	0
PF Seeded Italian	7.80	1.2	9.4	4.54	0	0	0
TOTAL			**6.6**		**3,055,601**	**1,528**	**5,078**

2023 H&S Bakery Production and Ethanol Emissions Data - Line 5

Month	Product (pounds)	Product (tons)	Ethanol (pounds)	Ethanol (tons)	Average Yt Value
Jan	2,833,474	1,417	5,072	2.54	7.2
Feb	2,424,775	1,212	4,155	2.08	6.8
Mar	2,718,151	1,359	5,199	2.60	7.7
Apr	2,859,411	1,430	5,359	2.68	7.5
May	2,733,444	1,367	4,698	2.35	6.9
Jun	2,060,291	1,030	3,907	1.95	7.7
Jul	2,958,990	1,479	5,433	2.72	7.4
Aug	2,240,263	1,120	4,050	2.02	7.3
Sep	2,853,851	1,427	5,035	2.52	7.1
Oct	2,705,929	1,353	4,834	2.42	7.2
Nov	2,675,210	1,338	4,636	2.32	6.9
Dec	3,055,601	1,528	5,078	2.54	6.6
Totals	**32,119,389**	**16,060**	**57,455**	**28.73**	**7.2**
% of Total (April - September)			**49.6%**		

H&S Line 5 - 12 Month Rolling Inventory

Month	Production (tons)	12-Month Rolling Inventory (tons)	Average Yt Value	12-Month Rolling Average Yt Value
Jan-19	1,441		8.5	
Feb-19	1,360		9.0	
Mar-19	1,606		8.6	
Apr-19	1,164		8.4	
May-19	1,295		7.8	
Jun-19	1,399		7.7	
Jul-19	1,304		7.6	
Aug-19	1,754		7.4	
Sep-19	1,377		7.7	
Oct-19	1,119		7.5	
Nov-19	1,409		7.3	
Dec-19	1,208	16,435	7.4	7.9
Jan-20	1,085	16,080	7.5	7.8
Feb-20	1,366	16,086	7.7	7.7
Mar-20	1,516	15,997	7.1	7.6
Apr-20	1,321	16,154	7.6	7.5
May-20	1,259	16,117	7.5	7.5
Jun-20	936	15,654	7.7	7.5
Jul-20	1,161	15,512	8.0	7.5
Aug-20	1,530	15,288	9.2	7.7
Sep-20	1,203	15,114	8.3	7.7
Oct-20	1,764	15,758	8.3	7.8
Nov-20	1,472	15,821	8.4	7.9
Dec-20	1,320	15,933	8.5	8.0
Jan-21	1,677	16,525	7.6	8.0
Feb-21	1,254	16,413	6.8	7.9
Mar-21	1,354	16,250	7.4	7.9
Apr-21	1,258	16,187	7.0	7.9
May-21	1,521	16,449	6.9	7.8
Jun-21	1,259	16,773	6.8	7.8
Jul-21	1,536	17,148	7.1	7.7
Aug-21	1,239	16,857	7.2	7.5
Sep-21	1,357	17,011	7.0	7.4
Oct-21	1,254	16,501	6.9	7.3
Nov-21	1,245	16,274	6.8	7.2
Dec-21	1,139	16,094	6.9	7.0
Jan-22	1,288	15,705	7.1	7.0
Feb-22	901	15,351	6.9	7.0
Mar-22	1,093	15,090	7.5	7.0
Apr-22	1,327	15,159	7.2	7.0
May-22	1,057	14,695	6.9	7.0
Jun-22	964	14,401	7.3	7.1
Jul-22	1,147	14,012	7.1	7.1
Aug-22	1,249	14,022	6.9	7.0
Sep-22	1,355	14,019	7.1	7.0
Oct-22	1,586	14,352	6.9	7.0
Nov-22	1,264	14,371	6.9	7.1
Dec-22	1,336	14,567	7.2	7.1
Jan-23	1,417	14,696	7.2	7.1
Feb-23	1,212	15,007	6.8	7.1
Mar-23	1,359	15,274	7.7	7.1
Apr-23	1,430	15,377	7.5	7.1
May-23	1,367	15,686	6.9	7.1
Jun-23	1,030	15,752	7.7	7.2
Jul-23	1,479	16,084	7.4	7.2
Aug-23	1,120	15,956	7.3	7.2
Sep-23	1,427	16,027	7.1	7.2
Oct-23	1,353	15,794	7.2	7.2
Nov-23	1,338	15,868	6.9	7.2
Dec-23	1,528	16,060	6.6	7.2

Quality Environmental Solutions, Inc.
Mailing Address P. O. Box 44
Bridgewater, VT 05034

Via email: mdeair.ACOMP@maryland.gov

March 27, 2024

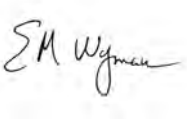
Mr. Scott Thompson
Maryland Department of the Environment
Air & Radiation Management Administration
Air Quality Compliance Program
1800 Washington Boulevard, Suite 715
Baltimore, Maryland 21230-1720

Re: Annual Compliance Certification Report for Calendar Year 2023
H&S Bakery, Inc.
603 South Bond Street
Baltimore, Maryland 21231
Facility ID # 510-00301

On behalf of H&S Bakery, Inc. and the parent company Northeast Foods, Inc., Quality Environmental Solutions (QES) is pleased to submit the attached 2023 Annual Compliance Certification Report.

If you have any questions regarding this Annual Compliance Certification Report, please feel free to contact Andrew Black of Northeast Foods at 410-558-3050 or the undersigned at 410-841-5552.

Sincerely,



Erin M. Wyman
Senior Project Manager

Cc: Andrew Black – NE Foods
Eric Mohrmann – H&S Bakery
R3_APD_Permits@epa.gov (USEPA Region III)

Attachment: ***2023 Compliance Certification Report***

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION MANAGEMENT ADMINISTRATION

ANNUAL CERTIFICATION OF PLANT-WIDE CONDITIONS

A. GENERAL INFORMATION

1. Identifying Information

   Source or Company Name: H&S Bakery, Inc.

   Mailing Address: Street or P.O. Box 603 South Bond Street

   City Baltimore State Maryland Zip 21231

   Contact Person: Andrew J. Black Title: VP of Engineering

   Telephone 410-558-3050 Ext: 3339 Part 70 Permit No.: 24-510-00301

2. Reporting Period

   Period Beginning: 01/01/2023 Period Ending: 12/31/2023

B. CERTIFICATION OF PLANT-WIDE CONDITIONS

1. *Particulate Matter from Construction and Demolition* – There were no construction or demolition activities that resulted in air emissions by the permittee.

2. *Open Burning* – There was no open burning.

3. *Air Pollution Episode* – A standby emissions reduction plan was not requested by MDE.

4. *Report of Excess Emissions and Deviations* – There were no excess emissions or deviations from permitted sources. The release of flour due to a faulty coupling on a conveyor pipe on March 19, 2023 was reported to MDE both orally and in writing.

5. *Accidental Release Provisions* – A risk management plan was not required as the facility was not subject to 40 CFR Part 68.

6. *General Testing Requirements* – General testing requirements were followed.

7. *Emissions Test Methods* – Emissions test methods specified in the permit were utilized.

8. *Emissions Certification Report* – The Annual Emissions Certification Report was submitted to MDE prior to April 1.

9. *Compliance Certification Report* – The Annual Compliance Certification Report was submitted to EPA and MDE prior to April 1.

10. *Certification by Responsible Official* – "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Andrew J. Black Title: VP of Engineering

Signature [signature] Date: 3-27-2024

11. *Sampling and Emissions Testing Record Keeping* – The record keeping requirements specified in the permit were followed with records maintained in the corporate office files.

12. *General Record Keeping* - The record keeping requirements specified in the permit were followed with records maintained in the corporate office files.

13. *General Conformity* – The General Conformity requirements do not apply to this facility.

14. *Asbestos Provisions* – The asbestos provisions do not apply as there were no renovation or demolition activities involving asbestos during the year.

15. *Ozone Depleting Regulations* – H&S complies with standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F.

16. *Acid Rain Permit* – The Acid Rain Program does not apply to this facility.

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR FEDERAL OPERATING PERMIT, 40 CFR PART 71

FORM A-COMP – ANNUAL COMPLIANCE CERTIFICATION

A. GENERAL INFORMATION

Part 70 Permit No. 24-510-00301

Reporting Period Beginning: 01/01/2023 Ending: 12/31/2023

Source or Company Name: H & S Bakery, Inc.

Mailing Address: Street or P.O. Box 603 South Bond Street

City Baltimore State Maryland Zip 21231

Contact Person: Andrew J. Black Title: VP of Engineering

Telephone 410-558-3050 Ext: 3339

B. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

1. Responsible Official

Name: (Last) Black (First) Andrew (Middle) J

Title: VP of Engineering

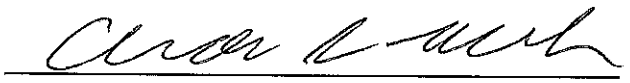
Street or Post Office Box: 601 South Caroline Street

City: Baltimore State Maryland Zip 21231

Telephone 410-558-3050 Ext: 3339 Facsimile: 410-558-9338

2. Certification of Truth, Accuracy and Completeness

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: (signed) 

Name: (printed or typed) Andrew J. Black Date: 3-27-2024

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Visible emissions other than water in an uncombined form are prohibited. Sections Table IV-1 1.1 A and Table IV-2 2.1 A A1	BLR-1 & BLR-2 and BO-1, BO-2, BO-3 & BO-5	☐ Intermittent Compliance ☒ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Describe all methods or means used to determine compliance with the permit term or condition described in Section C. For each monitoring method or means specify whether it produced intermittent or continuous data.

No monitoring or testing requirements. There were no visible emissions from permitted sources.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Boilers and ovens shall burn only natural gas. Maintain five years of monthly records of fuel use. Sections Table IV-1 1.1 B, Table IV-1 1.4 A & B, Table IV-2 2.1 A A2, Table IV-2 2.4 A & B	BLR-1 & BLR-2 and BO-1, BO-2, BO-3 & BO-5	☐ Intermittent Compliance ☒ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Natural gas is only fuel burned at the facility. Records of fuel use are maintained.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Report visible emissions. Section Table IV-1 1.5 A & B	BLR-1 & BLR-2	☐ Intermittent Compliance ☒ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

There were no visible emissions from permitted equipment. A Deviations Report was made to MDE in March 2023 regarding a flour release.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Concentration of particulate matter in exhaust gases < 0.03 grains/cf. Section Table IV-2 2.1 B	BO-1, BO-2, BO-3 & BO-5	☐ Intermittent Compliance ☒ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

No testing, monitoring, record keeping or reporting requirements.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Requirements for control of VOC emissions from bakery ovens. Section Table IV-2 2.1 C	BO-1, BO-2, BO-3 & BO-5	☐ Intermittent Compliance ☒ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Bakery ovens BO-1, BO-2, BO-3 & BO-5 (ovens installed after 01/01/1994) not subject to COMAR 26.11.19.21D(2) emissions controls as production tonnage and Yt values below threshold amounts specified in COMAR 26.11.19.21D(1).

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Determine production and Yt values monthly and on 12-month rolling basis for the largest oven installed before 01/01/1994 and each oven installed after 01/01/1994 (BO-1, BO-2, BO-3, and BO-5). Section Table IV-2 2.3 C	BO-1, BO-2, BO-3 & BO-5	☐ Intermittent Compliance ☒ Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Production and Yt values are determined for each month and on a monthly and 12-month rolling basis. Production data and Yt values demonstrate compliance with COMAR 26.11.19.21C and D.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Recordkeeping requirements. Sections Table IV-2 2.4 A, B, and C	BO-1, BO-2, BO-3 & BO-5	[ ] Intermittent Compliance [X] Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Five years of records of natural gas consumption, production and Yt values are maintained on a monthly, annual and 12-month rolling basis, as applicable.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Reporting requirements. Section Table IV-2 .2.5 A & B	BO-1, BO-2, BO-3 & BO-5	[ ] Intermittent Compliance [X] Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Types of fuel consumed (natural gas) was reported in the annual Emissions Certification Report.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Notify MDE within 10 days of determining that a bakery oven satisfies COMAR 26.11.19.21D(1). Section Table IV-2 .2.5 C	BO-1, BO-2, BO-3 & BO-5	[ ] Intermittent Compliance [X] Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

Conditions of COMAR 26.11.19.21D(1) were not satisfied by any bakery oven during the year.

C. COMPLIANCE STATUS OF EACH PERMIT TERM OR CONDITION

Identify (describe and cross-reference the permit term or condition)	Unit ID(s)	Compliance status during reporting period
Annual toxic air pollutants emissions certification report to be submitted by April 1. Section VI.4	All Emission Units	[ ] Intermittent Compliance [X] Continuous Compliance

D. METHODS USED TO DETERMINE COMPLIANCE

The Annual Emissions Certification Report was submitted to MDE and EPA.

E. DEVIATIONS FROM PERMIT TERMS AND CONDITIONS NONE

Permit Term for Which There is a Deviation & Whether Deviation is a "Possible Exception to Compliance"	Emission Unit ID(s)	Deviation Time Periods Date (mo/day/yr) Time (hr/min) Time Zone	Written Deviation Report Submittal Date (mo/day/yr)
Section V(6) Insignificant Activities- Bulk Flour Silos	Flour Silo	Beginning 3/19/2023 05:15 EST Ending 3/19/2023 05:35 EST	03/24/2023
		Beginning ___/___/___ ___:___ _____ Ending ___/___/___ ___:___ _____	
		Beginning ___/___/___ ___:___ _____ Ending ___/___/___ ___:___ _____	
		Beginning ___/___/___ ___:___ _____ Ending ___/___/___ ___:___ _____	
		Beginning ___/___/___ ___:___ _____ Ending ___/___/___ ___:___ _____	