ENVIRONMENTAL PROTECTION COMMISSION OF
HILLSBOROUGH COUNTY, as Delegated by

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF PERMIT

Santo Lazzara
Plant Engineer
Yuengling Brewing Company
11111 North 30th Street
Tampa, FL 33612

Dear Mr. Lazzara: Re: Hillsborough County - AP

Enclosed is FINAL Permit Number 0570006-018-AC for the after-the-fact construction of a new brewhouse and pneumatic grain handling system at Yuengling's malt beverage production facility in Tampa, FL. The current throughput and production limits will remain the same as previously permitted.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the EPC in the Legal Department at 3629 Queen Palm Dr., Tampa, Florida 33619; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the clerk of the EPC.

Executed in Tampa, Florida.

Sincerely,

Richard D. Garrity, Ph.D.
Executive Director

RDG/SRH/srh

cc: Florida Department of Environmental Protection (via e-mail)
Cory Houchin, P.E. – Environmental Sciences Group

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on _____ to the listed persons.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated clerk, receipt of which is hereby acknowledged.

_____ _____
Clerk Date

PERMITTEE:	PERMIT/CERTIFICATION
Mr. Santo Lazzara	Permit No.: 0570006-018-AC
Plant Engineer	County: Hillsborough
Yuengling Brewing Company	Expiration Date: July 30, 2013
11111 N. 30th St.	Project: Pneumatic Grain Handling and New Brewhouse
Tampa, FL 33612	

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 62-204, 62-210, 62-212, 62-296, 62-297, and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the EPC and made a part hereof and specifically described as follows:

For the after-the-fact construction of a new brewhouse and pneumatic grain handling system at a malt beverage brewing and packaging facility. The new brewhouse will replace the existing brewhouse, and consists of one mash vessel, one cereal cooker, one spent grain separator (lauter tun), two spent grain hoppers, one spent grain storage silo, one trub tank, two 775 BBL combination brew kettles/hot wort settling tanks, one wort cooler, and one wort aerator. The existing brewhouse and the remaining components of the existing grain handling system will only be used in the case of an emergency. In addition, the new pneumatic grain handling system will replace the aging screw conveyors and bucket elevators. Also, the existing baghouses will be replaced with four (4) filter receivers/dust collectors. The new grain handling system will be able to direct grain from any of the nine silos to the new or existing brewhouse.

Grain (malt or grits) will be unloaded from railcars by gravity drop into a pit. From the pit, the grain will be pneumatically transferred to the grain storage silos at a maximum rate of 25 tons/hr. From the silos, grain will be pneumatically transferred to the transfer filter receiver. Depending on the type of grain, the material will be transferred directly to the scale hoppers or to a grinding mill for processing at a maximum rate of 9 tons/hr. The milled grain will be transferred via bucket elevator to the scale hoppers and into the cereal cooker or mash vessel for brewing.

Particulate matter (PM) emissions from the transfer of grain to the silos will be controlled by a Buhler Inc. RPPR 24/6 Filter Receiver rated at 980 dscfm. PM emissions from the grain storage silos will be controlled by a Buhler Inc. RPBV Model 9/3 Bin Vent Filter rated at 300 dscfm. PM emissions from the transfer of grain from the silos to the scale hoppers or grinding mill will be controlled by a Buhler Inc. RPPR 18/6 Transfer Filter Receiver with bin vent filter rated at 663 dscfm. Emissions from the grain milling operation and bucket elevator will be controlled by a Buhler Inc. RPPR 18/6 Dust Collector rated at 1,000 dscfm. All of the baghouses and filter receivers

are designed to meet an exhaust grain loading of 0.02 gr/dscf. The new pneumatic system is subject to the same limitations as the existing mechanical system, so no change in potential PM emissions (2.2 tpy) will result from this project. Also, no increase in grain throughput was requested as part of this project.

The brewing process begins at the mash vessel. Grain from the grain mill is gravity fed into a mash vessel, mixed with water, and heated. Depending on the type of grain, it may also be mixed with water and processed in the cereal cooker prior to brewing. After the grains are heated in the mash vessel, the liquid is referred to as wort. From the mash tub, the wort is passed through a mash filter to separate the liquid from the spent grains and the grains are pumped to a storage silo where they are stored until shipped offsite. From the mash filter, the wort is pumped to one of two brew kettles where it is sterilized and mixed with hops. From there, the wort is pumped to the grain separator (lauter tun) where the liquid is separated from the hops. The wort is then sent to the wort cooler where the wort is cooled, aerated in-line, and pumped to one of eighty-four, 550 barrel capacity fermenting tanks. The brewing process takes approximately four hours to complete.

Yeast from one of two yeast storage tanks is pumped into the top of the fermenting tanks to start the fermentation process. The fermentation tanks are initially vented for 16 to 24 hours to purge undesirable organic impurities, and then closed. CO_2, a byproduct of the fermentation reaction, is collected, sent through activated carbon filters, scrubbed with water, and compressed into a liquid. The fermentation process takes approximately 7 days to complete. The exhaust from the 84 fermenters is sent to a common manifold and discharged to the atmosphere through four vents. Once finished fermenting, the mixture is sent to a centrifuge to separate the yeast from the liquid. From this point on, the liquid is referred to as beer. The yeast is returned to the yeast storage tank for use in the next fermentation cycle or pumped to two spent yeast storage silos where it is stored until shipped offsite. CO_2 is pumped to one of two Wittemann, Model No. 4163, scrubbers to remove impurities and the pure CO_2 gas is sent to a compressor which compresses the gas into a liquid. The liquid CO_2 is stored in three pressurized storage tanks for use during the bottling process.

After the beer is separated from the yeast, the beer is pumped to a chiller and then to one of seventy-four storage tanks. Depending on production needs, some of the storage tanks are used for the aging of unfiltered beer (called Ruh storage tanks) and some of the tanks store filtered beer that is ready for final packaging (called Government Cellar Storage Tanks). The aging process takes up to three weeks to complete, and the process gas is purified and discharged to the atmosphere through one of five vents. The fifty-five (55) Ruh storage tanks have a capacity of 1,160 barrels each.

Once the beer is ready to be packaged, it is pumped from the Ruh storage tanks through a series of three filters and finally into the Government Cellar storage tanks. The nineteen (19) Government Cellar Storage Tanks consist of thirteen (13) 1,160 barrel storage tanks and six (6) 590 barrel storage tanks. The process gas from the Government Cellar storage tanks is discharged to the atmosphere through a single vent. From the Government Cellar storage tanks, the beer is pumped to the packaging lines.

There is one can packaging line, one bottle packaging line, and one keg packaging line. Prior to being filled, the kegs are emptied and cleaned with a caustic solution. Each can is coded before being filled. After the containers are filled, CO_2 is injected into the containers to prevent the product

from oxidizing, and the containers are sealed. The bottles are coded and labeled after being sealed. The bottles and cans are pasteurized using hot water in one of two pasteurizing lines after being filled and sealed. One pasteurizing line is used exclusively for cans and the other is used exclusively for bottles.

After the cans have been filled, any cans that are rejected for quality control reasons are crushed in the can crusher at a maximum rate of 9,000 cans per hour. The product inside the cans is discharged to the sewer, however, VOC emissions are emitted due to evaporation of the product.

Steam will be provided by two 800 HP natural gas boilers, which are exempt from permitting pursuant to Rule 62-210.300(3)(a)34, F.A.C. However, the boilers are subject to 40 CFR 60 Subpart Dc and are required to keep daily records of fuel usage. The two (2) existing 600 HP and 300 HP boilers will be operated when steam demand is low or when the two (2) 800 HP boilers need to be taken off-line. Cooling for the brewing processes is provided by a closed-loop ammonia refrigeration system.

The following is a description of the equipment associated with each emission unit:

<u>Emission Unit Nos. 002, 003, 004 – Grain Unloading, Transfer from Storage, and Milling/Processing</u>
Pneumatic grain transfer equipment, one bucket elevator, two scale hoppers, and one grinding mill.

<u>Emission Unit No. 006 - Brewing Processes</u>
The Brewhouse which consists of one mash vessel, one cereal cooker, one spent grain separator (lauter tun), two spent grain hoppers, one spent grain storage silo, one trub tank, two 775 BBL combination brew kettles/hot wort settling tanks, one wort cooler, and one wort aerator.
Eighty-four fermenting tanks with a total of 4 vents
Two spent yeast storage tanks, each with one vent
Two CO_2 scrubbers
Three CO_2 compressors and three CO_2 storage tanks
Ruh Storage tanks* with one main discharge vent and four backup vents
One chilled water tank

<u>007 - Finished Product Processes</u>
Government Cellar Storage tanks* with one discharge vent
One chilled water tank
One can packaging line
One bottle filling line
One keg filling line

<u>008 - Can Crusher</u>
Can crusher

<u>011 - Pasteurizer</u>
One pasteurizing line for cans
One pasteurizing line bottles

*- The total number of Ruh storage and Government Cellar storage tanks is seventy-four. The number of tanks used as Ruh storage and Government Cellar storage may vary due to process and brewing needs. Some Ruh storage tanks may be used for Government Cellar storage (or chilled water) and some Government Cellar storage tanks may be used for Ruh storage (or chilled water).

VOC emissions from the brewing and packaging operation are controlled by limiting the brewery production and product packaging throughput. The existing brewhouse and remaining components of the existing grain handling system will only be used in the case of an emergency.

The following activities at the facility are considered insignificant:

A. Product Coding – twelve machines apply product tracking codes to bottles, cans, and cartons utilizing solvent-based and water based inks and dyes.
B. Adhesive Use - for affixing labels to bottles and for assembly of cartons and boxes
C. Parts Cleaning - three Safety-Kleen parts washing stations
D. Activated Carbon Regeneration

Location: 11111 North 30th Street, Tampa, FL 33612

UTM: 17-362.00E and 3103.20N NEDS No: 0570006

Emission Unit Nos.: 002 – Grain Unloading
003 – Grain Transfer from Storage
004 – Grain Milling/Processing
006 – Brewing Processes
007 – Finished Product Processes
008 – Can Crusher
011 – Pasteurizers

References Permit Nos.: 0570006-002-AC, 0570006-003-AC, 0570006-015-AO

SPECIFIC CONDITIONS:

1. A part of this permit is the attached General Conditions. [Rule 62-4.160, F.A.C.]

2. All applicable rules of the Environmental Protection Commission of Hillsborough County including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction. [Rule 62-4.070(7), F.A.C.]

3. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C., or any other requirements under federal, state, or local law. [Rule 62-210.300, F.A.C.]

4. The use of property, facilities, equipment, processes, products, or compounds, or the commission of paint overspraying or any other act, that causes or materially contributes to a public nuisance is prohibited, pursuant to the Hillsborough County Environmental Protection Act, Section 16, Chapter 84-446, Laws of Florida, as Amended.

5. In order to limit the potential to emit and establish the facility as a synthetic minor for both criteria and Hazardous Air Pollutants (HAP), the following emission limitations shall apply: [Rules 62-296.320, 62-212.300, 62-210.200, and 62-4.070(3), F.A.C., Permit No. 0570006-015-AO, and Air Construction Permit Application received April 20, 2012]

A) The maximum VOC emissions from the brewery operations shall not exceed 49.5 tons for any 12 consecutive month period.
B) The maximum PM emissions from the grain handling system shall not exceed 0.02 gr/dscf and 2.2 tons for any 12 consecutive month period.
C) The HAP, as defined in Rule 62-210.200, F.A.C., emissions shall be less than 10 tons in any 12 consecutive month period for any individual HAP, and less than 25 tons in any 12 consecutive month period for any combination of HAPs.

6. In order to demonstrate compliance with Specific Condition No. 5, the following limitations shall not be exceeded during any twelve consecutive month period: [Chapter 1-3.52.2 of the Rules of the EPCHC and Rule 62-4.070(3) and 62-297.620(4), F.A.C. and Air Construction Permit Application received April 20, 2012]

A) Maximum brewed or fermented throughput shall not exceed 1.3 MMBBL
B) Maximum combined finished product throughput shall not exceed 1.8 MMBBL packaged into kegs, cans, and bottles
C) Maximum Grain Unloading Rate: 25 tons/hour and 219,000 tons per twelve consecutive month period

SPECIFIC CONDITIONS:

D) Maximum Grain Transfer Rate from Storage: 9 tons/hour and 78,840 tons per twelve consecutive month period
E) Maximum Grain Milling/Processing Rate: 9 tons/hour and 78,840 tons per twelve consecutive month period
F) Each baghouse shall be in operation during any transfer activities they are designed to control.
G) Due to the expense and complexity of conducting a particulate matter stack test, visible emissions from each grain handling or processing emission unit shall not exceed 5% opacity.

7. The hours of operation are not limited. [Rule 62-4.070(3), F.A.C.]

8. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320, F.A.C.]

9. In order to demonstrate compliance with Specific Condition Nos. 5 and 6, the permittee shall maintain monthly records of the operation for the most recent three year period. The records shall be made available to the Environmental Protection Commission of Hillsborough County, state or federal air pollution agency upon request. The records shall include, but not be limited to, the following: [Rule 62-4.070(3) and 62-4.160(14)(b), F.A.C.]

<u>Brewing Processes</u>
A) Monthly total of the brewed or fermented throughput in MBBL
B) Monthly total of the packaged finish product throughput in MBBL
C) Rolling twelve month total for items A) and B) above

<u>Grain Handling/Processing</u>
D) Grain unloaded (tons)
E) Grain transferred from storage (tons)
F) Grain processed / milled (tons)
G) Duration of grain unloading (hours)
H) Duration of grain transfer from storage (hours)
I) Duration of grain milling (hours)
J) Rolling twelve month total of items D) through I) above

10. Test the exhaust from each grain handling and processing emission unit for visible emissions within 60 days of startup of the pneumatic grain handling system and once per federal fiscal year (October 1 – September 30) thereafter. Submit two copies of the test data to the Air Management Division of the Environmental Protection Commission of Hillsborough County within forty-five days of such testing. Testing procedures shall be consistent with the requirements of Rule 62-297.310, F.A.C.

SPECIFIC CONDITIONS:

11. Compliance with the emission limitations of Specific Condition No. 6.G) shall be determined using EPA Method 9 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The EPA Method 9 test observation period on each baghouse shall be at least thirty (30) minutes. The minimum requirements for source sampling and reporting shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A.

12. The permittee shall notify the Air Compliance Section of the Environmental Protection Commission of Hillsborough County at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the contact person who will be responsible for coordinating and having such test conducted. [Rule 62-297.310(7)(a)9., F.A.C.]

13. Testing of emissions from the grain handling and processing shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of the maximum process rates listed in Specific Condition No. 6. If it is impracticable to test at capacity, then the source may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the EPC. Failure to submit the input rates and actual operating conditions may invalidate the test. [Rules 62-4.070(3) and 62-297.310(2)(b), F.A.C.]

14. The permittee shall not store, handle, process, or use in any process the volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems as follows and as deemed necessary and ordered by the Environmental Protection Commission of Hillsborough County: [Rule 62-296.320(1), F.A.C.]

A) Maintain tightly fitting cover, lids, etc. on all containers when they are not being handled, tapped, etc.
B) Where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, etc. of VOC so that it can be covered when not in use.
C) Immediately attend to all spills/waste as appropriate.
D) Operating and maintaining the activated carbon filters and CO_2 scrubbers.

15. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Rule 62-296.320, F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alterations, demolition or wrecking, or industrial related activities such as loading, unloading, storing, and handling. Reasonable precautions shall include, but are not limited to, the following: [Rule 62-296.320(4)(c), F.A.C.]

SPECIFIC CONDITIONS:

A) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
B) Immediately attend to all spills.
C) Store all grains in the grain storage silos.

16. When the Environmental Protection Commission of Hillsborough County (EPC) after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rules 62-204, 62-210, 62-212, 62-296, or 62-297, F.A.C., or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the source to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the EPC. [Rule 62-297.310(7)(b), F.A.C.]

17. The VOC emission factors listed in the RACT evaluation of the Stroh Brewery in Fogelsville, PA, and the procedures used in the Construction Application of February 8, 1996, shall be used to demonstrate compliance with the VOC emission limitations of Specific Condition No. 5.A) [Rule 62-4.070(3), F.A.C.]

18. The permittee shall provide timely notification to the Environmental Protection Commission of Hillsborough County prior to implementing any changes that may result in a modification to this permit pursuant to Rule 62-210.200(205), F.A.C., and Modification. The changes do not include normal maintenance, but may include, and are not limited to, the following, and may also require prior authorization before implementation: [Rules 62-210.300 and 62-4.070(3), F.A.C.]

A) Alteration or replacement of any equipment or major component of such equipment listed in this permit.
B) Installation or addition of any equipment which is a source of air pollution.
C) The use of materials other than those authorized by this permit.
D) Increase in usage of inks or dyes, coding machine cleaner, and adhesive.

19. Submit to the Environmental Protection Commission of Hillsborough County each calendar year on or before April 1, completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility", for the preceding calendar year. [Rule 62-210.370(3)(a), F.A.C. and Permit No. 0570006-002-AC]

20. If the permittee wishes to transfer this permit to another owner, an "Application for Transfer of Air Permit" (DEP Form 62-210.900(7)) shall be submitted, in duplicate, to the Environmental Protection Commission of Hillsborough County within 30 days after the sale or legal transfer of the permitted facility. [Rule 62-4.120, F.A.C.]

SPECIFIC CONDITIONS:

21. A minimum of two copies of an application for an air operation permit shall be submitted to the Environmental Protection Commission of Hillsborough County within 60 days of completion of construction of the new brewhouse and compliance testing of the pneumatic grain handling system or at least 90 days prior to the expiration date of this permit, whichever occurs first. The application shall also include a copy of the required compliance tests and the previous three months of records required by this permit. [Rules 62-4.050(2) and 62-210, F.A.C.]

ENVIRONMENTAL PROTECTION COMMISSION
OF HILLSBOROUGH COUNTY

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Richard D. Garrity, Ph.D.
Executive Director