TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

Victoria J. Tschinkel
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

October 22, 1981

Mr. John Mueller
Anheuser-Busch, Inc.
P. O. Box 18017, A.M.F.
Jacksonville, Florida 32229

Enclosed is Permit Number AC 16-39951, dated October, 1981
to Anheuser-Busch, Inc.
issued pursuant to Section 403, Florida Statutes.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management

cc: Pat Nolan, Pat Nolan & Associates
Johnny Cole, FDER, St. Johns River Subdistrict
Steve Pace, BES, Jacksonville, FL

DER Form 17-1.122(65)

FINAL DETERMINATION

Anheuser-Busch Incorporated
Jacksonville, Florida

Construction Permit
Application Number
AC 16-39951

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting
October 20, 1981

STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION

CONSTRUCTION
PERMIT

NO. AC 16-39951

Anheuser-Busch, Inc.
Jacksonville, Florida

DATE OF ISSUANCE

September 22, 1981

Victoria J. Tschinkel

DATE OF EXPIRATION

January 25, 1982

DER FORM PERM 11-42

Anheuser-Busch Construction Permit Final Determination

Anheuser-Busch's Construction Permit Application for the modification of four (4) existing process steam boilers at the Jacksonville plant has been reviewed by the Bureau of Air Quality Management. Public notice of the Department's intent to issue was published in the Florida Times Union on September 18, 1981. Copies of the preliminary determination were available for public inspection at the Duval County Department of Health, Welfare and Bio-Environmental Services, (BES), the Florida Department of Environmental Regulation (FDER, St. Johns River Subdistrict office), and at the Bureau of Air Quality Management.

Comments on the preliminary determination were received from BES and from the applicant. The comments were discussed with both parties and the following amendments to the preliminary determination were made in preparing the Departments Final Determination:

1. The upgrading of the subject boilers are for the process steam boilers rather than for power generation. The wording in the description has been changed to reflect this difference. It does not change the permitted emissions, only qualifying the specific use of the subject boilers.

2. The specific conditions as stated in the preliminary conditions require a 10% opacity limitation. This is incorrect and should be 20%. The final determination reflects this change. This is in compliance with 17-2.05 (b) (2) for existing fossil fuel steam generators.

3. The maximum heat input value requested by the applicant per boiler was 100 MMBTU. Past tests have not been conducted in the preferred range of 10% $\pm$ of this value. The local agency would prefer that the compliance test be conducted in that range of the permitted value. Since there has been some modification to the boilers (mode of operation and stack alterations), the compliance tests prior to issuance of an operation permit will verify the capacity of the subject boilers. Therefore, there is no necessity to amend the permitted heat input value for the boilers.

4. The specific condition regarding compliance tests (#4) was expanded to include EPA Method 5 for particulate matter. It is the general policy of the Department to require a particulate test to assure the compliance with the emission limit established in the construction

permit. A surrogate test may be substituted after compliance is established.

The final Department action will be to issue the construction permit with the previously discussed comments account for.

Technical Evaluation
and
Preliminary Determination

Anheuser-Busch Companies
Permit Number AC 16-39951

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

September 18, 1981

PROPOSED DEPARTMENT ACTION

The Department intends to issue the requested permit to Anheuser Busch Companies for the modification of four power boilers at the existing plant site in Duval County. The issuance of this permit is subject to public comment as a result of this public notice.

Any person wanting to comment on this section may do so by submitting such comments in writing to:

Clair Fancy
Department of Environmental Regulation
Bureau of Air Quality Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Any comments received within thirty days after publication of this notice will be considered and noted in the Department's final determination.

Any person whose substantial interest would be affected by the issuance or denial of this permit may request an administrative hearing by filing a petition for hearing as set forth in Section 28-5.15 FAC (Copy attached) such petition must be filed within 14 days of the date of this notice with:

Mary Clark
Department of Environmental Regulation
Office of General Counsel
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

I. PROJECT DESCRIPTION

A. Applicant

Anheuser-Busch, Inc.
111 Busch Drive
Jacksonville, Florida

B. Project and Location

The applicant's proposed construction consists of the upgrading of four (4) existing process boilers from a maximum heat input of 66 MMBTU per hour to 100 MMBTU per hour. The facility is located in Jacksonville, Duval County, Florida. The UTM coordinates are 743.93 km East and 3366.82 km North.

C. Process Description

The four power boilers at the Anheuser-Busch, Inc. plant in Jacksonville, Florida are fired on Number Six (6) fuel oil, presently at the permitted rate of 66 million BTU per hour. The modification will increase the potential firing rate to 100 million BTU per hour.

The heat of combustion is used to produce steam which in turn is used for processing within the facility. The exhaust gases are vented through a 100 foot stack from each boiler.

II. RULE APPLICABILITY

The proposed project is located in the area of influence of the Jacksonville particulate nonattainment area. Duval County is also nonattainment for ozone. The project is classified as a modification pursuant to 17-2, Florida Administrative Code (FAC), as a change in the mode of operation. There are to be no projected increases in fuel usage and no net increase in emissions above the presently permitted annual emissions. Therefore no PSD or BACT determination will be necessary.

III. SUMMARY OF EMISSIONS AND AIR QUALITY ANALYSIS

A. Emission Limitations

The pollutants emitted by this source are particulate, sulfur dioxide and nitrogen oxides. The total emissions from the facility are as follows:

Pollutant	lb/hr	Tons/yr
Particulate	40.0	84.8
Sulfur Dioxide	1000.0	2120

Pollutant	lb/hr	Tons/yr
Nitrogen Oxides	160.0	340

The emission limitations are based on using 2.5% sulfur fuel oil in four boilers rated at a maximum of 100 MBTU/hr. The boilers will operate on a rotating schedule allowing all the four boilers to operate 24 hours a day but not to exceed 4132 hours (total) per year per boiler. On a normal operating schedule, only 3 boilers operate simultaneously. The total annual operating hours will not increase over the previous year nor will the total fuel consumption. Therefore, the annual emissions will not increase.

B. Air Quality Impacts

As there will be no increase in fuel consumption over the previous year, the construction and operation of this facility will not have any impact on ambient air quality standards. Air quality modeling performed by the company and reviewed by the Department confirms this.

IV. CONCLUSIONS

The emission limitations stated previously are based on the applicants estimated fuel consumption to be what it consumed the last calendar year. The fuel consumption and hours permitted to operate shall be stated as conditions of the permit.

The General and Specific Conditions listed in the proposed permit will assure compliance with all applicable requirements of Chapter 17-2, F.A.C.

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR
Victoria J. Tschinkel
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICANT:

Anheuser Busch Companies
111 Busch Drive
Jacksonville, Florida

PERMIT/CERTIFICATION
NO. AC 16-39951

COUNTY: Duval

PROJECT: Upgrading of 4 power boilers to 100 MBTU

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

Modification of four process steam boilers, upgrading the heat capacity from 66.1 MBTU to 100 MBTU to provide electricity for the facility.

Attachments:

Application to Construct Air Pollution Sources, DER Form 17-1.122 (16).

PERMIT NO.:
APPLICANT:

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions:, and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalities therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

[ ] Determination of Best Available Control Technology (BACT)
[ ] Determination of Prevention of Significant Deterioration (PSD)
[ ] Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 16-39951
APPLICANT: Anheuser Busch Companies

SPECIFIC CONDITIONS:

1. Maximum allowable emissions from the facility will be:

Pollutant	lb/hr.	Tons/yr.
Particulate	10 lb/hr. (per boiler)	21.2 (per boiler)
Sulfur Dioxide	250 lb/hr. (per boiler)	530.0 (per boiler)
Nitrogen Dioxide	40 lb/hr (per boiler)	85.0 (per boiler)

2. Total combined operation of all boilers shall not exceed 16,528 hours per year.

3. Opacity shall not exceed 20%.

4. Compliance with the emission limitations shall be determined for particulates as per EPA Reference Method 5, 40 CFR Part 60. The visible emission test shall be EPA Reference Method 9, 40 CFR Part 60. The total consumption of fuel oil, (#6) shall not exceed 64,152 gal. per day 24 hour period not to exceed 44.5 M gal in a calendar year.

5. Monthly documentation shall be made available to the Department or its designee, Jacksonville Bio-Environmental Services (JBES) of the following operating parameters:

   (a). Fuel consumed per boiler.
   (b). Number of hours of operation per boiler.
   (c). Heat input per boiler based on a 24 hr. average.

6. A monthly report shall be submitted upon request beginning from the date of issuance of the operating permit to the Departments designee, JBES.

7. A visible emission test shall be performed to establish compliance with the opacity limitations prior to application for an operating permit.

8. A thirty day notice prior to emission testing shall be provided by the applicant to the Departments designee, JBES.

9. Following approval of test results and prior to 90 days before the expiration of this permit a complete application for an operating permit shall be submitted to the DER, St. Johns River Subdistrict Office or its designee. Full operation of the source may then be conducted in compliance with the terms of this permit until expiration or receipt of an operating permit.

PERMIT NO.:
APPLICANT:

Expiration Date: January 25, 1982

Issued this 22 day of September, 1981.

_____ Pages Attached.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Victoria J. Tschinkel
Signature

PAGE _____ OF _____.

DER FORM 17-1.122(63) 4/4 (1/80)

AC 16-39951

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Air Pollution [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: Anheuser-Busch, Inc. COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) Process Steam Boilers Nos. 1, 2, 3 and 4

SOURCE LOCATION: Street 111 Busch Drive City Jacksonville

UTM: East 7437930 North 3366820 to 3366850

Latitude 30 ° 25 ' 59 "N Longitude 81 ° 38 ' 47 "W

APPLICANT NAME AND TITLE: Mr. John Mueller, Plant Manager

APPLICANT ADDRESS: P. O. Box 18017, A.M.F. Jacksonville, FL 32229

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Anheuser-Busch, Inc.

I certify that the statements made in this application for a Construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: John Mueller

John Mueller, Plant Manager
Name and Title (Please Type)

Date: _____ Telephone No. (904) 751-0700

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed: Charles M. Nolan, P.E.

PAT NOLAN, P.E.
Name (Please Type)

(Affix Seal)

Pat Nolan & Associates
Company Name (Please Type)

8282 Western Way Circle, Suite 111
Mailing Address (Please Type) Jax., Fla. 32216

Florida Registration No. 19889 Date: (904) Telephone No. 731-4288

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

This construction will extend the height of each boiler stack from 52.5 ft to 100 ft. The four identical boilers are Babcock and Wilcox Co., Model FM 1035-79 (National Board No. 22857, 22856, 22855 and 23814). Computer modeling predicts that the higher stacks will allow the operation of all four boilers at 100 x 10^6 BTU/hr input each (capacity) without violating the Florida SO_2 ambient air quality standard.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction July 1, 1981 Completion of Construction Aug. 31, 1981

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A016-2435, -2436, and -2437 expired 6/30/80. Renewal requested subject to SO_2 modeling evaluation. Renewals to be withdrawn at the time of this application. A016-12824 expires 8/31/83.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes __X__ No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; If power plant, hrs/yr ____ ;

If seasonal, describe: ____

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? ____
   a. If yes, has "offset" been applied? ____
   b. If yes, has "Lowest Achievable Emission Rate" been applied? ____
   c. If yes, list non-attainment pollutants. ____
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. ____
3. Does the State "Prevention of Significant Deterioration" (PSD) requirements apply to this source? If yes, see Sections VI and VII. ____
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? ____
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? ____

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): for each of four boilers - 90,000 lb/hr max (water-steam)

2. Product Weight (lbs/hr): - 90,000 lb/hr max (steam)

C. Airborne Contaminants Emitted: See attached Emission Calculations
EACH boiler at 100 x 10^6 BTU/hr input

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	17.2	36.5	Use 17-2.05(6) Table II	10	17.2	75.4	1,2,3,4
Sulfur Dioxide	239	506	Source "E"(1)(b)	250	239	1046	
		172 lbs	1.a.* (per Mr. E.				
		x4 = 688 T/yr	Balducci)				
Nitrogen Oxide	40.0	85	None specified	--	40.0	175	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard

[4] Emission, if source operated without control (See Section V, Item 3)

[5] If Applicable

* 0.1 lb particulate per 10^6 BTU heat input.

2.5 lb SO_2 per 10^6 BTU heat input

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 fuel oil	8 bbl	16 bbl	100 per boiler

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: 2.28 (nominal based on 2.5 lb $SO_2/10^6$ BTU) Percent Ash: 0.1 max

Density: 8.2 (nominal) lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb 150,000 (nominal) BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

About 10 GPM of boiler blowdown is routed in the sanitary sewer system to the District No. 2 City Sewage Treatment Plant.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack): (same data for each of four stacks)

Stack Height: 100 ft. Stack Diameter: 4.5 ft.

Gas Flow Rate: 33,100 (est.) ACFM Gas Exit Temperature: 410 °F.

Water Vapor Content: 6.2 % Velocity: 35 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner [ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

10. Stack Parameters

a. Height: ft. b. Diameter: ft.

c. Flow Rate: ACFM d. Temperature: °F

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space and operate within proposed levels:

4.

a. Control Device

b. Operating Principles:

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

Period of monitoring _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from _____ / _____ / _____ to _____ / _____ / _____
month day year month day year

2. Surface data obtained from (location) _____

3. Upper air (mixing height) data obtained from (location) _____

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO^2	_____ grams/sec

E. Emission Data Used in Modeling

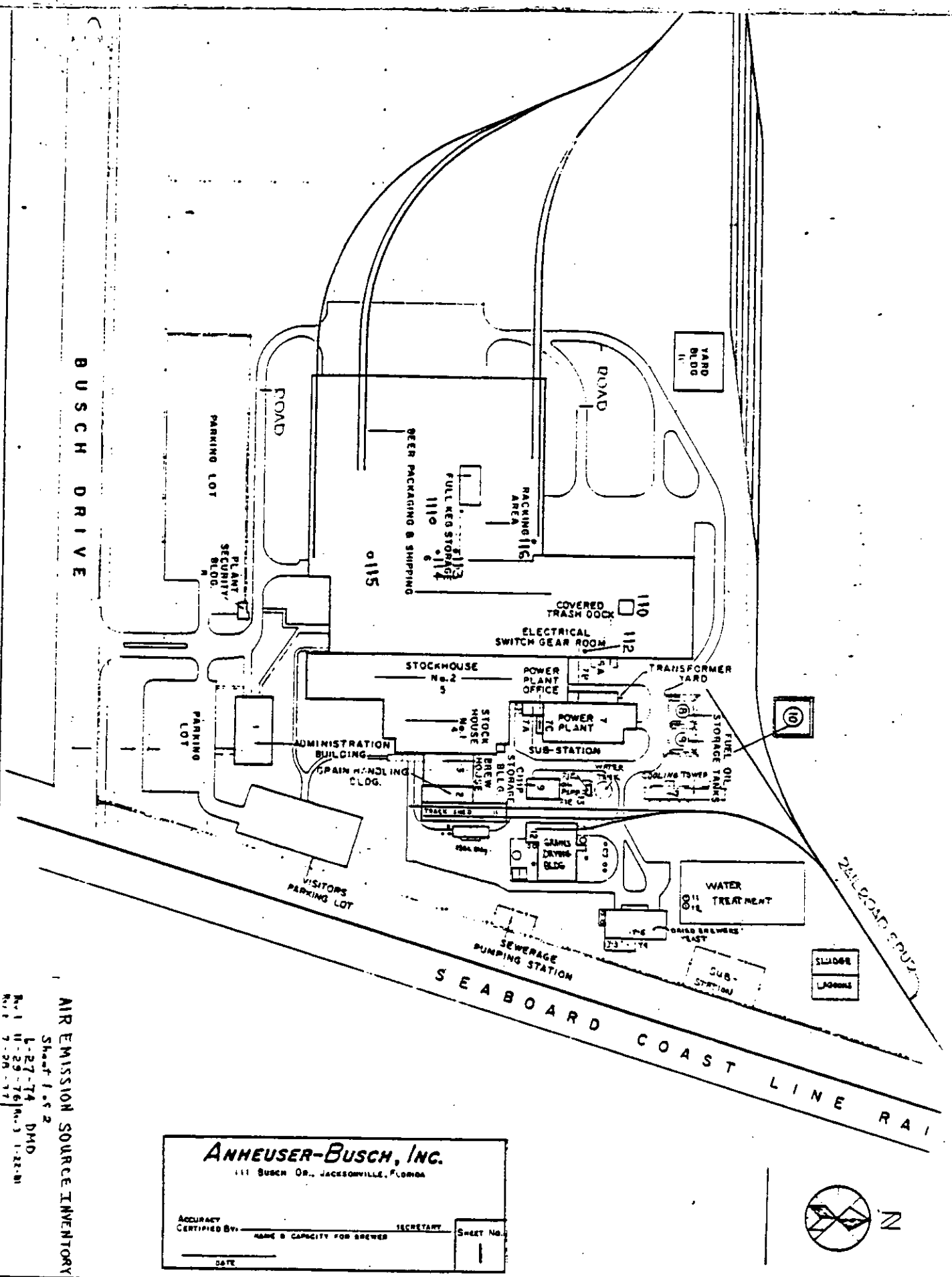
Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

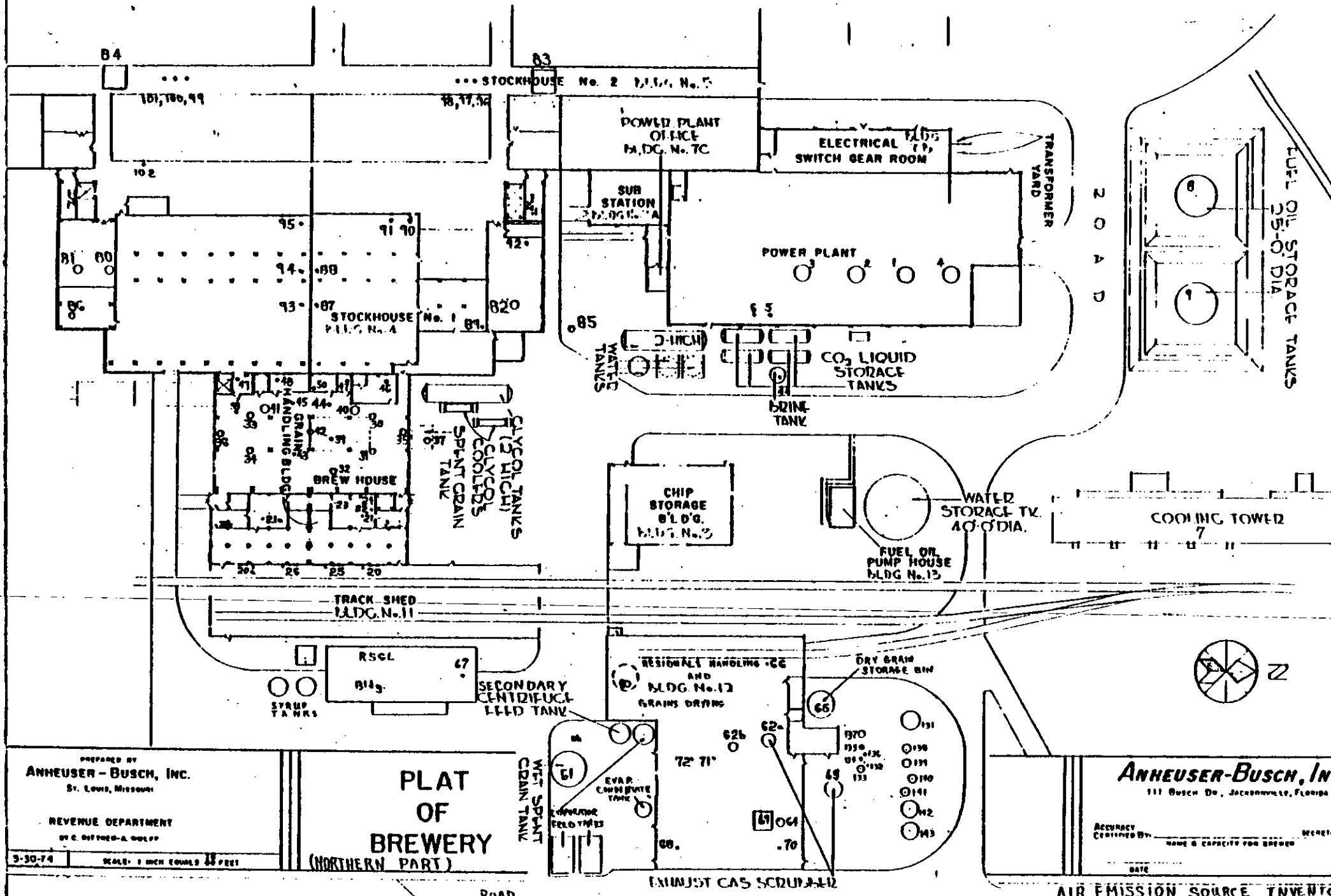


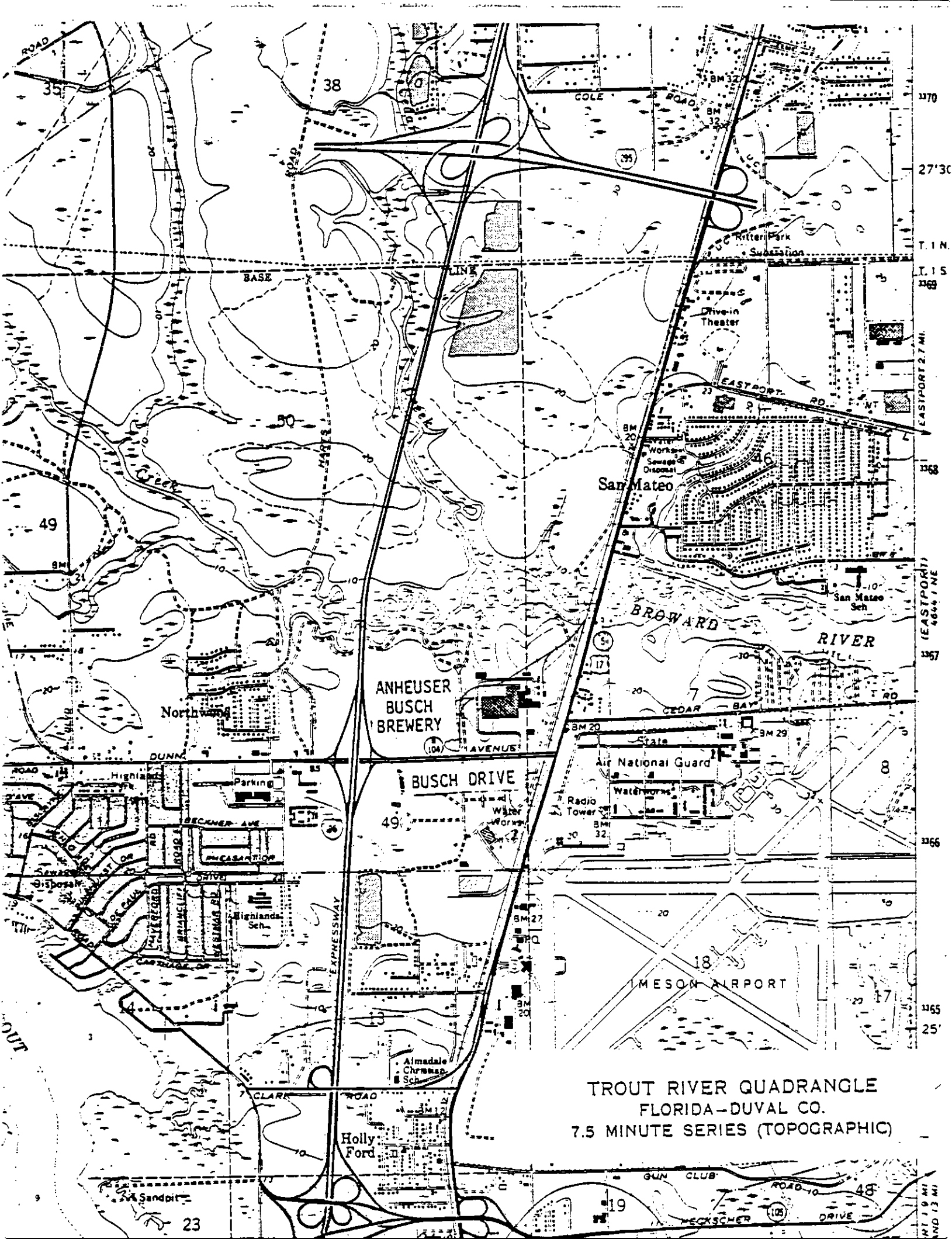
AIR EMISSION SOURCE INVENTORY
Sheet 1 of 2
1-27-74 DMD
Rev 1 11-29-76 Rev 2 1-22-81
Rev 3 7-28-77

PREPARED BY
ANHEUSER - BUSCH, INC.
ST. LOUIS, MISSOURI

REVENUE DEPARTMENT
BY C. RITTBERG & WULFF

PLAT OF BREWERY LOCATION PLAT


STOCKHOUSE No. 2 BLDG. No. 5
POWER PLANT OFFICE BLDG. No. 7C
ELECTRICAL SWITCH GEAR ROOM
SUB STATION BLDG. No. A
POWER PLANT
TRANSFORMER YARD
ROAD
FUEL OIL STORAGE TANKS 25'-0" DIA
STOCKHOUSE No. 1 BLDG. No. 4
GRAIN HANDLING BLDG.
BREW HOUSE
SPENT GRAIN TANK
GLYCOL TANKS (12' HIGH)
GLYCOL COOLERS
WATER TANKS
BRINE TANK
CO2 LIQUID STORAGE TANKS
CHIP STORAGE BLDG. BLDG. No. 3
WATER STORAGE TK. 40'-0" DIA.
FUEL OIL PUMP HOUSE BLDG No. 13
COOLING TOWER 7
TRACK SHED BLDG. No. 11
RSCL
SYRUP TANKS
SECONDARY CENTRIFUGAL FEED TANK
RESIDUAL HANDLING AND BLDG. No. 12 GRAINS DRYING
DRY GRAIN STORAGE BIN
WET SPENT GRAIN TANK
EVAP. CONDENSATE TANK
EVAPORATOR FEED TANKS
EXHAUST GAS SCRUBBER
72' 71'
68.
.70
PREPARED BY ANHEUSER-BUSCH, INC. St. Louis, Missouri
REVENUE DEPARTMENT
9-30-74
PLAT OF BREWERY (NORTHERN PART)
ANHEUSER-BUSCH, IN
111 Busch Dr., Jacksonville, Florida
AIR EMISSION SOURCE INVENTO
Sheet 2 of 2
6-27-74 DMD
Rev 1 11-29-76
Rev 2 7-15-
Rev 3 6-21-
Rev 4 1-9-



TROUT RIVER QUADRANGLE
FLORIDA–DUVAL CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

ANHEUSER-BUSCH, INC.
JACKSONVILLE BREWERY
EMISSION CALCULATIONS PER BOILER

(Section III C and E)

I. Section IIIC and E

A. Emission Factors

From AP-42, 3rd. Ed. Table 1.3-1 For Industrial Residual Oil.
Here S equals the percent by weight of sulfur in the oil.

Pollutant	Emission lb/1000 gal	Emission With 2.28% S oil, lb/1000 gal
Particulate	10(S) + 3	25.8
Sulfur Dioxide	157(S)	358.0
Nitrogen Oxides	60	60.0
Carbon Monoxide	5	5.0
Hydrocarbons	1	1.0

B. Sulfur Limit of Oil

SO_2 emissions limited to 2.5 lb $SO_2/10^6$ BTU input. This equates to:

$$\frac{2.5 \text{ lb } SO_2}{10^6 \text{ BTU}} \times \frac{.15 \times 10^6 \text{ BTU}}{\text{gal oil}} \times \frac{\text{gal oil}}{8.2 \text{ lb oil}} \times \frac{\text{lb S}}{2 \text{ lb } SO_2} = 0.02287 \frac{\text{lb S}}{\text{lb oil}} \text{ or } 2.28\% \text{ S}$$

C. Maximum Oil Usage

Bases: 100×10^6 BTU/hr max. input per boiler and 150,000 BTU/gal for No. 6 fuel oil.

$$\frac{100 \times 10^6 \text{ BTU}}{\text{hr}} \times \frac{\text{gal}}{0.15 \times 10^6 \text{ BTU}} = 667 \text{ gal/hr.}$$

D. Maximum Emissions

	(Emission Factor) (lb/1000 gal)	x	(Max. oil usage) x(0.667 x 1000 gal)	=	Max. Emissions
Particulates	25.8	x	0.667	=	17.2 lb/hr
SO_2	358.0	x	0.667	=	239.0 lb/hr
NO_x	60.0	x	0.667	=	40.0 lb/hr

E. Actual Annual Emissions

Bases: 2,828,000 gallons of No. 6 fuel oil used in boiler No. 1 in 1979.

$$\text{(Emission Factor)} \times \text{(Oil Used)} \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}}\right) = \text{Actual Emissions}$$

$$\text{(lb/1000 gal)} \times \text{(2,828 x 1000 gal)} \times \left(\frac{1}{2000}\right)$$

Particulate	25.8	x	(2,828/2000)	=	36.5 tons/yr
SO_2	358.0	x	(1.414)	=	506 tons/yr
NO_x	60.0	x	(1.414)	=	84.8 tons/yr

F. Potential Emissions

1. Hourly Potential Emissions equal hourly Maximum Emissions (Par. D) as there are no additional emission control devices on the boilers.

2. Annual Potential Emissions assume continuous operation or 8760 hr/yr.

$$\left\{\begin{matrix}\text{Hourly} \\ \text{Potential} \\ \text{Emissions}\end{matrix}\right\} \times \left\{\begin{matrix}\text{Operating} \\ \text{Time}\end{matrix}\right\} \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}}\right) = \text{Annual Potential Emissions}$$

$$\text{(lb/hr)} \times \left\{\begin{matrix}8760 \\ \text{hr/yr}\end{matrix}\right\} \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}}\right)$$

Particulate	17.2	x	(8760/2000)	=	75.4 tons/yr
SO_2	239.0	x	(4.38)	=	1046.0 tons/yr
NO_x	40.0	x	(4.38)	=	175.0 tons/yr

G. Allowable Emissions

Chapter 17-2.05(6) Table II Source E(2) states "apply latest technology" for particulate, sulfur dioxide, and nitrogen oxides. For plant locality per Mr. Ed Balducci on 4/22/80, we are to use limits of 0.1 lb. particulate and 2.5 lb SO_2 per 10^6 BTU input over a 2-hr average. No limit is specified for NO_x. From application, each boiler has input capacity of 100 x 10^6 BTU/hr.

	(Emission Limit) (lb/10^6 BTU)	x	(Input Capacity) (100 x 10^6 BTU/hr)	=	Allowable Emissions
Particulate	0.1	x	(100)	=	10 lb/hr
SO_2	2.5	x	(100)	=	250 lb/hr

II. Section III H

Percent water in flue gases

Reference: Steam, Its Generation and Use by Babcock and Wilcox Co. 37th Ed., 1963. Chapter 4, Table 5 (page 4 - 9).

For fuel oil per 10,000 BTU as fired.

Theoretical dry air -- 7.46 lb

Fuel -- 0.54 lb

Resulting Moisture -- 0.51 lb

Incoming moisture (wet air) -- 0.0132 lb H_2O/lb dry air @ 60% RH and 80° F.

At 120 % of theoretical air (20% excess)

Total dry air -- 1.2(7.46) = 8.95 lb

Incoming H_2O -- 1.2(7.46)(0.0132) = 0.12 lb

Thus, in flue gases

Total water -- $0.12 + 0.51 = 0.63$ lb

Total gases -- $0.63 + 8.95 + 0.54 = 10.12$ lb

So, water in flue gases -- $\frac{0.63}{10.12}(100\%) = 6.2\%$

LIST

ALL

11/08/80. 16.36.17.
LIST OF RESULTS

1PLANT NAME: AB JACKSONVILLE BREWERY POLLUTANT: SO2 EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3
THIS RUN COMBINES ALL 4 BOILER STACKS INTO A SINGLE SOURCE

	MET FILE STN NO.	YR	REQUESTED STN NO.	YR
SURFACE	13889	70	13889	70
UPPER AIR	13861	70	13861	70

PLANT LOCATION: RURAL
NO TAPE OUTPUT
MET DATA WILL NOT BE PRINTED

```
DAY-- 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

* N O T E * * * * * * * * * * * * * * *

ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN -ANNUAL- IN THE HEADING ARE BASED ONLY ON THOSE [
DAYS MARKED BY [1[IN THE ABOVE TABLE

RING DISTANCES(KM)= .40 .60 .80 1.00 1.20

PLANT ELEVATION (FEET ABOVE SEA LEVEL)-- 0.0 PLANT ELEVATION (METERS ABOVE SEA LEVEL)-- 0.0

	RECEPTOR ELEVATIONS (FEET ABOVE SEA LEVEL)					RECEPTOR ELEVATIONS (METERS ABOVE SEA LEVEL)				
DIRECTION	RING"1	RING"2	RING"3	RING"4	RING"5	RING"1	RING"2	RING"3	RING"4	RING"5
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

STACK * 1— COMBINED BOILER STACK

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	126.0000	30.50	1.37	10.60	483.00	15.63

PLANT NAME: AB JACKSONVILLE BREWERY POLLUTANT: SO2 EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

		MAX HOURLY				MAX 24-HOUR		
DAY	RATIO	CONCENTRATION	DIRECTION	DISTANCE(KM)	HOUR	CONCENTRATION	DIRECTION	DISTANCE(K

-TRM*
-RDY*
$F.540

YEARLY MAXIMUM 24-HOUR CONC= 2.1508E-04 DIRECTION= 5 DISTANCE= 1.2 KM DA
-Y=223
-RDY*

$F.584
YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.0302E-04 DIRECTION= 5 DISTANCE= 1.0
- KM DAY= 79
-RDY*

DAY 79 = 22 Hrs
M = 5

$F.628
YEARLY MAXIMUM 3-HOUR CONC= 6.9294E-04 DIRECTION= 31 DISTANCE= .6 KM
- DAY=163 TIME PERIOD= 5
-RDY*

$F.672
YEARLY SECOND MAXIMUM 3-HOUR CONC= 5.5427E-04 DIRECTION= 31 DISTANCE=
- .3 KM DAY=202 TIME PERIOD= 4
-RDY*
UNS RESULTS
-RDY*
BYE
CT = 01.03 SU-S = 12.4
KCH = 45
AS41001 LOG OFF. 16.43.41.

SECTION II: GENERAL PROJECT INFORMATION Rev. 1, 4/14/81

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

This construction will extend the height of each boiler stack from 52.5 ft to 100 ft. The 4 identical boilers are Babcock and Wilcox Co., Model FM 1035-79 (National Board No. 22857, 22856, 22855 and 23814). Modeling predicts that the higher stacks will allow the operation of all 4 boilers at 100 x 10^6 BTU/hr input each (capacity) without violating the Florida SO2 ambient air quality standard.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction July 1, 1981 Completion of Construction Aug. 31,1981

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Extending boiler stacks from the present height of 52.5 ft to 100 ft. - $130,000 (est.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A016-2435, -2436, and -2437 expired 6/30/80. Renewal requested subject to SO_2 modeling evaluation. Renewals to be withdrawn at the time of this application. A016-12824 expires 8/31/83.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ___ Yes _X_ No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr ___ ;

if seasonal, describe: ___

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? No
   a. If yes, has "offset" been applied? ___
   b. If yes, has "Lowest Achievable Emission Rate" been applied? ___
   c. If yes, list non-attainment pollutants. ___
2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII. ?
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY Rev. 1, 4/14/81

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [X] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [X] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Sulfur dioxide	250 lb/hr/boiler or 1000 lb/hr (maximum rate)

D. Describe the existing control and treatment technology (if any).

1. Control Device/System: None
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration
Sulfur dioxide	165.25 lb/hr/boiler or 661 lb/hr (maximum permit rate)

*Explain method of determining D 3 above.

10. Stack Parameters At input of 66.1 x 10^6 BTU/hr (100 x 10^6 BTU/hr)

a. Height:	present 52.5 ft.	b. Diameter:	4.5 ft.
c. Flow Rate:	est. 21,000 (33,100) ACFM	d. Temperature:	390 (410) °F
e. Velocity:	22 (35) FPS		

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device: Stacks increased to height of 100 ft. and outlet diameter decreased to 3.5 ft.

b. Operating Principles: A taller stack (still less than GEP) will give better dispersion of SO_2 at ground level.

c. Efficiency*: NA (not applicable)

d. Capital Cost: $130,000 (est.)

e. Useful Life: 20 years

f. Operating Cost: ~ $ 0

g. Energy*: ~ $ 0

h. Maintenance Cost: none

i. Availability of construction materials ~~and process chemicals~~: stack materials are available

j. Applicability to manufacturing processes: NA

k. Ability to construct with control device, install in available space, and operate within proposed levels:

There is adequate space and support to install 100 ft. stacks.

2.

a. Control Device: Lower oil sulfur content to 1.5% from current 2.28%

b. Operating Principles: The SO_2 emissions from the firing of No. 6 fuel oil are directly proportional to the sulfur content of the oil.

c. Efficiency*: 33% $\left[\frac{(2.28 - 1.5)\ 100}{2.28}\right]$

d. Capital Cost: None

e. Useful Life: NA

f. Operating Cost: Est. $300,000/yr (current prices)

g. Energy**: None

h. Maintenance Costs: None

i. Availability of construction materials and process chemicals: No. 6 fuel oil with a 1.5% sulfur content is available in the Jacksonville area.

j. Applicability to manufacturing processes: NA

k. Ability to construct with control device, install in available space, and operate within proposed levels: NA

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

h. Maintenance Cost:

*Explain method of determining efficiency above.

(5) Environmental Manager:

Rev. 1, 4/14/81

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

Modeling results show that increasing the stacks on the four existing boilers to 100 ft. will allow all four boilers to operate simultaneously at capacity and not violate the Florida ambient air quality standards for SO_2.

*Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII – PREVENTION OF SIGNIFICANT DETERIORATION Rev. 1, 4/14/81

A. Company Monitored Data

1. _____ no sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

Period of monitoring ___/___/___ to ___/___/___
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? ____ Yes ____ No

b) Was instrumentation calibrated in accordance with Department procedures? ____ Yes ____ No ____ Unknown

B. Meteorological Data Used for Air Quality Modeling

1. 1 Year(s) of data from 01 / 01/ 70 to 12 / 21 / 70
month day year month day year

Note: 5 years of data, 1970 thru 1974, were evaluated. 1970 gave the highest annual 3 hr. concentrations.

2. Surface data obtained from (location) 13889 Jacksonville, FL

3. Upper air (mixing height) data obtained from (location) 13861 Waycross, GA

4. Stability wind rose (STAR) data obtained from (location) _____

C. Computer Models Used

1. CRSTER (not modified) Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	-- grams/sec
SO^2	126.0 grams/sec

E. Emission Data Used in Modeling This is the total emission from all four (4) boilers operating continuously at capacity (100 x 10^6 BTU/hr each) at 2.5 lb $SO_2/10^6$ BTU.

Attach list of emission sources. Emission data required is source name, description on point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

*Specify bubbler (B) or continuous (C).

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

SECTION II: GENERAL PROJECT INFORMATION Rev. 2, 5/28/81

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

The applicant desires to increase the allowable maximum firing rate to 100 x 10^6 BTU/hr per boiler. This is the input capacity for each boiler as indicated on all previous permit applications. Each boiler is currently permitted to operate at a maximum of 66.1 x 10^6 BTU/hr. The four (4) boilers are Babcock & Wilcox Co., Model FM 1035-79 (National Board No. 22857, 22856, 22855 and 23814). Modeling predicts that 100 ft. stacks will allow the operation of all 4 boilers at 100 x 10^6 BTU/hr input each (capacity) without violating the Florida SO_2 ambient air quality standard.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction _____ Completion of Construction _____

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

_____

_____

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

A016-2435, -2436, and -2437 expired 6/30/80. Renewal requested subject to SO_2 modeling evaluation. Renewals to be withdrawn at the time of this application.

A016-12824 expires 8/31/83.

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes __X__ No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr _____ ;

if seasonal, describe: _____

_____

G. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? no
   a. If yes, has "offset" been applied? _____
   b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
   c. If yes, list non-attainment pollutants.

   _____

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. no
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements apply to this source? If yes, see Sections VI and VII. ?
4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? no
5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? no

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable: Rev. 1, 5/28/81

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): for each of four boilers - 90,000 lb/hr max (water-steam)
2. Product Weight (lbs/hr): - 90,000 lb/hr max (steam)

C. Airborne Contaminants Emitted: See attached Emission Calculations
EACH boiler at 100 x 10^6 BTU/hr input

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	10.0*	21.2	Use 17-2.05(6) Table II	10	10.0	43.8	1,2,3,4
Sulfur Dioxide	250**	530	Source "E"(1)(b)	250	250	1095	
			1.a.** (per Mr.				
			E. Balducci)				
Nitrogen Oxide	40.0	85	None specified	--	40.0	175	

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]

[1] See Section V, Item 2.

[2] Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

[3] Calculated from operating rate and applicable standard

[4] Emission, if source operated without control (See Section V, Item 3)

[5] If Applicable

* Maximum allowable. Also see emission tests of April, 1981.

** 0.1 lb particulate per 10^6 BTU heat input.

2.5 lb SO_2 per 10^6 BTU heat input

E. Fuels

Rev. 1, 5/28/81

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
No. 6 fuel oil	8 bbl	16 bbl	100 per boiler

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr

Fuel Analysis:

Percent Sulfur: 2.28 (nominal based on 2.5 lb $SO_2/10^6$ BTU) Percent Ash: 0.1 max.

Density: 8.2 (nominal) lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb 150,000 (nominal) BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

About 10 GPM of boiler blowdown is routed in the sanitary sewer system to the District No. 2 City Sewage Treatment Plant.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack): (same data for each of four stacks)

Stack Height: 100 ft. Stack Diameter: 4.5 (3.5 at outlet) ft.

Gas Flow Rate: 33,100 (est.) ACFM Gas Exit Temperature: 410 °F.

Water Vapor Content: 6.2 % Velocity: 35 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ days/week _____

Manufacturer _____

Date Constructed _____ Model No. _____

D. Maximum Emissions

	(Florida allowable) $(lb/10^6$ BTU input)	x	(capacity input) $(100 \times 10^6$ BTU/hr input)	= Max. Emissions
Particulates	0.1	x	100	= 10.0 lb/hr
SO_2	2.5	x	100	= 250 lb/hr

NOTE: Particulate test results performed in April, 1981, confirm that the boilers meet this standard.

E. Actual Annual Emissions

Basis: 2,828,000 gallons of No. 6 fuel oil used in boiler No. 1 in 1979. At 150,000 BTU/gal, this is equivalent to 424.2×10^9 BTU input.

	(Florida allowable) $(lb/10^6$ BTU input)	x	(annual input) $(424.2 \times 10^9$ BTU)/2000	x $\left(\frac{1 \text{ ton}}{2000 \text{ ton}}\right)$	= Actual Emissions
Particulate	0.1	x	(424,200/2000)		= 21.2 tons/yr
SO_2	2.5	x	212.1		= 530 tons/yr

F. Potential Emissions

1. Hourly Potential Emissions equal hourly Maximum Emissions (Par. D) as there are no additional emission control devices on the boilers.

2. Annual Potential Emissions assume continuous operation or 8760 hr/yr.

$$\left(\begin{matrix}\text{Hourly}\\ \text{Potential}\\ \text{Emissions}\end{matrix}\right) \times \left(\begin{matrix}\text{Operating}\\ \text{Time}\end{matrix}\right) \times \left(\frac{1 \text{ ton}}{2000 \text{ lb}}\right) = \text{Annual Potential Emissions}$$

$$(\text{lb/hr}) \times \left(\frac{8760 \text{ hr}}{\text{yr}}\right) / 2000$$

Particulate	10.0	x	(8760/2000)	=	43.8 tons/yr
SO_2	250	x	(4.38)	=	1095 tons/yr

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: The File

FROM: Clair Fancy

DATE: October 26, 1981

SUBJ: Anheuser Busch - Jacksonville

On October 20, 1981 John Stier, Environmental Engineer for Anheuser Busch Companies, talked to Bill Thomas and I about the addition of an over-varnish operation on all four of their can coating lines at the Jacksonville Facility. This over-varnish is necessary to prevent abrasion of the cans as this product is sent to different parts of the country.

This process will be an extra step in the inking process prior to the cans going to the drying ovens. The modification will not require extensive equipment changes.

At the maximum production rate of 800 cans per minute per line, this operation will increase VOC emissions by 95 tons per year, assuming annual operation of 8,760 hours per year.

This will be a nonattainment permit and will require a LAER determination and the assignment of New Source Allowance for the area.

RACT for this type of process is 2.8 pounds of VOC per gallon of coating less water. The company will be proposing a coating of 2.1 pounds of VOC per gallon less water.

The application will be formally submitted to the Department prior to the first of November. We indicated that, since modeling and extensive engineering review of this application shouldn't be necessary, we would attempt to issue the permit as expeditiously as possible.

cc: John Ketteringham
Steven Pace

CF:caa