

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the matter of:)
Maxwell House Coffee Co.)
Petitioner)
_____)

Permit No. AC16-184772
ASP-91-A-01

RECEIVED

JUN 13 1991

Division of Air
Resources Management

ORDER APPROVING REQUEST

FOR

ALTERNATE TEST PROCEDURES AND REQUIREMENTS

Pursuant to Rule 17-2.700(3), Florida Administrative Code, Maxwell House Coffee Company, petitioner, submitted a request for approval of the use of EPA Method 9 in lieu of EPA Method 5 for compliance verification procedures for petitioner's dense phase airveyor with custom built Buhler-type "cyclone," permit number AC16-184772, located in Duval County.

Having considered petitioner's written request and all supporting documentation, the following Findings of Fact, Conclusions of Law, and Order are entered:

FINDINGS OF FACT

1. On January 17, 1991, petitioner specifically requested approval to use EPA Method 9 in lieu of EPA Method 5 for annual testing requirements for particulate matter emissions from the dense phase airveyor with custom built Buhler-type "cyclone, as specified in permit number AC16-184772. Further, petitioner, requests an emission limit of no visible emissions (5% opacity) in lieu of the less stringent 20% opacity presently allowed.

Check Sheet

Company Name: MAXWELL HOUSE
Permit Number: AC 16-184772
PSD Number: _____
Permit Engineer: _____

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

Cross References:

-
-
-

Intent:

- Intent to Issue
- Notice of Intent to Issue
- Technical Evaluation
- BACT Determination
- Unsigned Permit

Correspondence with:

- EPA
- Park Services
- Other
- Proof of Publication
- Petitions - (Related to extensions, hearings, etc.)
- Waiver of Department Action
- Other

ATTACHMENT #6 APPEARS TO BE MISSING
UNLESS IT WAS DATED 12/7/90
& RECEIVED 12/11/90

Final Determination:

- Final Determination
- Signed Permit
- BACT Determination
- Other

Post Permit Correspondence:

- Extensions/Amendments/Modifications
- Other

John Michael.

Plant Engineer. 10,000
904-366-3343
42,000 T/YR 12,000

8,400

I.T.R.

allowed Total.
26.59 T PY.

2.57 #/Hr.
D-3 & D-4.

6.33 #/Hr.
D1 thru - D8.

8400 Hrs./YR.

actual 4.423 T/YR.

Actual
3200 Hrs/YR

581.053 Lbs/Hr.

D-2 thru D-8.
AD 16 - 157749
AC 16 - 121136
D-1 is a separate permit.
D-9

813-985-1308

AC 16- 121136 → Continuous Roasting
Issued oct 13, 87.
March 1, 88

MSA **MISSIMER & ASSOCIATES, INC.**
Environmental and Groundwater Consultants

GEORGE L. WHITMER
Manager - Environmental Compliance Services

8130 Baymeadows Way West
Suite 104
Jacksonville, Florida 32256
(904) 448-6400
Fax (904) 448-8556
CAPE CORAL • MIAMI • TAMPA • JACKSONVILLE

2. As justification for the waiver of the annual EPA Method 5 compliance test requirements, petitioner stated that an annual EPA Method 9 test would be conducted with a more stringent visible emission limit of no visible emissions (5% opacity).

CONCLUSIONS OF LAW

1. The Department has jurisdiction to consider petitioner's request pursuant to Section 403.061, Florida Statutes, and Rule 17-2.700(3), Florida Administrative Code.

2. The Department retains the right to require a quantitative compliance test pursuant to 17-2.700(2)(b) if, after investigation, it is believed that any applicable emission standard is being violated.

3. Petitioner has demonstrated that the proposed alternate compliance verification method would be adequate to verify the compliance of the unit with the particulate matter and visible emission limiting standards.

ORDER

Having considered petitioner's written request and supporting documentation, it is hereby ordered that:

1. The relief requested by petitioner is granted;
2. Petitioner shall conduct the EPA Method 9 visible emission tests using the procedures specified in Rule 17-2.700, Florida Administrative Code; and
3. Petitioner shall conduct the annual EPA Method 9 visible emission tests within 60 days of completion of construction and during the corresponding quarter of each federal fiscal year (October 1 - September 30), thereafter; and

4. Petitioner shall submit the EPA Method 9 test report to the Jacksonville Bio-Environmental Services Division and the Deputy Assistant Secretary for the Northeast District.

RIGHT TO APPEAL

Any party to this Order has the right to seek judicial review of the Order 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 Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 the Notice of Agency Action is filed with the Clerk of the Department.

PETITION FOR ADMINISTRATIVE REVIEW

1. A person whose substantial interests are affected by the Department's decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 21 days of receipt of this Order. Petitioner shall mail a copy of the petition to the applicant at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

2. The petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, and the Department File Number;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

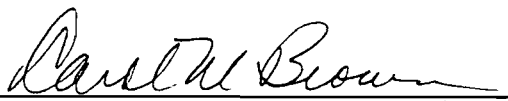
3. If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Order. Persons whose substantial interests will be affected by any decision of the Department with regard to the applicant have the right to petition to become a party to the proceeding. The petition must conform with the requirements

specified above and be filed (received) within 21 days of receipt of this notice in the Office of General Counsel at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

4. This Order constitutes final agency action unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070. F.A.C. Upon timely filing of a petition or a request for an extension of time this Order will not be effective until further Order of the Department.

DONE AND ORDERED this 17 day of April, 1991 in Tallahassee, Florida.

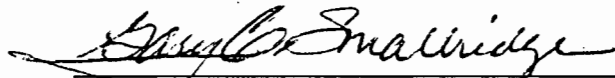
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION


CAROL M. BROWNER
Secretary
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

(904) 488-4805

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing Order has been mailed, postage prepaid, to Mr. James S. Alves, Hopping Boyd Green & Sams, Attorneys and Counselors, 123 South Calhoun Street, P. O. Box 6526, Tallahassee, Florida, 32314, this 18th day of April, 1991.



GARY C. SMALLRIDGE
Assistant General Counsel

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Telephone (904) 488-9730

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check boxes) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. James H. Reese Plant Manager Maxwell House Coffee Co. 735 East Bay Street Jacksonville, FL 32203	4. Article Number P 407 853 152 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery 18 FEB 1991	

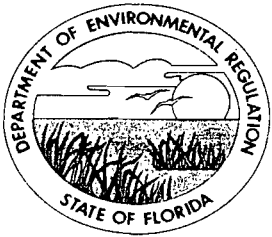
PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 407 853 152
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

*U.S.G.P.O. 1989-234-555

Sent to Mr. James H. Reese, Maxwell House	
Street and No. 735 East Bay Street	
P.O., State and ZIP Code Jacksonville, FL 32203	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 2-14-91 Permit: AC 16-184772	

PS Form 3800, June 1985



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION NOTICE OF PERMIT

Mr. James H. Reese, Plant Manager
Maxwell House Coffee Company
735 East Bay Street
Jacksonville, Florida 32203


February 14, 1991

Enclosed is construction permit AC 16-184772 for your company to construct a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

Any party to this 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 Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

Copy furnished to:

S. L. Alexander, P.E.
Johnny Cole, NE Dist.
Ron Roberson, BESD

Final Determination

Maxwell House Coffee Company
Jacksonville Plant
Duval County, Florida

Permit Number: AC 16-184772

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

February 4, 1991

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida, was distributed on January 4, 1991. The Notice of Intent to Issue was published in the Florida Times-Union on January 14, 1991. Copies of the evaluation were available for public inspection at the Department's offices in Jacksonville and Tallahassee.

No comments were submitted on the Department's Intent to Issue the permit. The final action of the Department will be to issue construction permit AC 16-184772 as proposed in the Technical Evaluation and Preliminary Determination.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Maxwell House Coffee Company
735 East Bay Street
Jacksonville, Florida 32203

Permit Number: AC 16-184772
Expiration Date: June 30, 1991
County: Duval
Latitude/Longitude: 30°19'27"N
81°39'00"W

Project: Dense Phase
Airveyor - Green Bean Silo
Cyclone, Permit ID "D-9"

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. 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 Department and made a part hereof and specifically described as follows:

To install a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo from which it is fed either to Probat or Thermo Roasters at a continuous average flow of 100 lbs./hr. Emissions during the airveying are controlled by a custom built Buhler-type Cyclone at a designed air flow of 300 ACFM. This source is designated as D-9.

This facility is located at 735 East Bay Street, Jacksonville, Duval County, Florida and the UTM coordinates are Zone 17,437.6 km East and 3354.7 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in this General and Specific Conditions.

Attachments are listed below:

1. DER's incompleteness letter dated September 6, 1990.
2. Maxwell House's response received September 25, 1990.
3. DER's incompleteness letter dated October 24, 1990.
4. Maxwell House's partial response received October 25, 1990.
5. Maxwell House's partial response received November 9, 1990.
6. Maxwell House's partial response received December 7, 1990.
7. Maxwell House's partial response received December 10, 1990.

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

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 Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement 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 applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), 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. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use 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.

5. This permit does not relieve the permittee from liability for harm or injury to human health and welfare, animal, plant or aquatic life or property and penalties therefor 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, unless specifically authorized by an order from the Department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

GENERAL CONDITIONS:

related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copy any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. 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.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

GENERAL CONDITIONS:

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 Sections 403.73 and 403.111, Florida Statutes.

10. The 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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.
- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

GENERAL CONDITIONS:

- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware, that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Maxwell House Coffee Company's facility D-9, the dense phase airveyor shall be allowed to operate continuously (i.e., 8760 hrs./yr.).
2. Particulate emissions from this facility shall not exceed 0.24 lbs./hr. and 0.99 tons/year.
3. The visible emissions from the cyclone installed on this source shall not exceed 20% opacity.
4. Compliance with the particulate and visible emission limitation specified in Specific Condition Nos. 2 and 3 shall be determined using EPA Methods 5 and 9 respectively. Such tests shall be conducted within 60 days of completion of construction and initial operation. The minimum requirements for stack sampling facilities, source sampling and reporting shall be in accordance with Rule 17-2.700, F.A.C. and 40 CFR 60, Appendix A. The source may request an alternate sampling procedure.

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 15-184772
Expiration Date: June 30, 1991

SPECIFIC CONDITIONS:

5. Should the Department have any reason to believe the particulate emission standard is not being met, the Department may require that compliance with the particulate emission standards be demonstrated by testing in accordance with F.A.C. Section 17-2.700.

6. No objectionable odors from this facility will be allowed.

7. The Northeast District office and Jacksonville Bio-Environmental Services Division office shall be given written notice at least 15 days prior to compliance testing.

8. All reasonable precautions shall be taken during construction to prevent and control the generation of unconfined emissions of particulate matter in accordance with the provisions in F.A.C. Section 17-2.610(3). These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling.

9. The permittee shall comply with all applicable provisions of Florida Administrative Code Chapters 17-2 and 17-4.

10. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 17-4.090, F.A.C.).

11. An application for an operation permit must be submitted to the Northeast District office and the Jacksonville Bio-Environmental Services Division office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

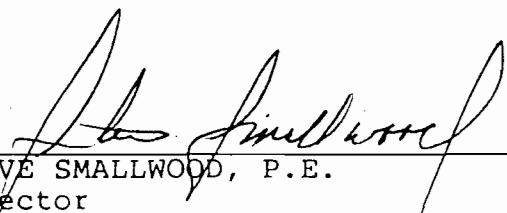
PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

SPECIFIC CONDITIONS:

Issued this 14th day
of February, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

TO: Steve Smallwood

FROM: Clair Fancy *CF*

DATE: February 5, 1991

SUBJ: Approval of Construction Permit AC 16-184772
Maxwell House Coffee Company



Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida.

No comments were received during the public notice period.

Day 90, after which this permit will be issued by default, is April 4, 1991.

I recommend your approval and signature.

CF/MB/plm

Attachments

CAF

NO. see SC #3, 4, 11 correct

pleas

[Signature]
2-6-91

2/11
changed as requested
CF



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

January 22, 1991

C.H. Fancy, P.E., Bureau Chief
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: **Proof of Publication
Notice of Intent to Issue
Maxwell House Coffee Company**

Dear Mr. Fancy:

The subject Notice of Intent to Issue was published in the Florida Times-Union on January 14, 1991. The enclosed Proof of Publication is submitted in accordance with Chapter 17-103.150(1), FAC.

Chapter 17-103.150(2)(c), F.A.C., requires that the Proof of Publication be submitted within seven days of publication. As can be seen from the Proof of Publication, although it was published on Monday, January 14, it was not notarized until Thursday, January 17. It was probably mailed either that evening or on Friday, January 18 and arrived here on Saturday, January 19. We received the notice on Monday, January 21. As that was a holiday with no mail delivery or pickup, today, January 22, is the first opportunity we have had to mail the notice. This exceeds the seven days requirement but the late mailing by the newspaper and the holiday prevented us from receiving the notice prior to the eighth day. The submittal, however, is a good faith effort performed as soon as possible under the circumstances described.

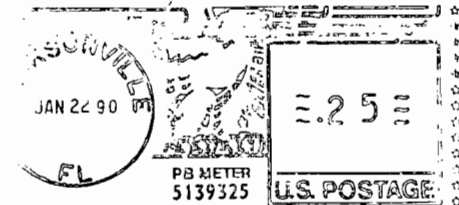
RECEIVED
JAN 24 1991
DER-BAQAM



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256



C.H. Fancy, P.E., Bureau Chief
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400



Mr. C.H. Fancy
January 22, 1991
Page 2

Please call me if you have any questions concerning this
submittal.

Sincerely,

MISSIMER AND ASSOCIATES, INC.



George L. Whitmer
Manager
Environmental Compliance Services

GLW/lis

Enclosure

cc: John Michel - Maxwell House
Jim Alves - HBGS

M. Bailey
A. Kutyma, NE Dist
R. Robinson, BESD

FLORIDA PUBLISHING COMPANY

Publisher

JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared _____

Donna Sapp _____ who on oath says that he is

a classified advertising rep _____ of The Florida Times-Union,

a daily newspaper published at Jacksonville in Duval County, Florida; that the

attached copy of advertisement, being a legal notice _____

in the matter of state of Florida _____

in the _____ Court,

was published in THE FLORIDA TIMES-UNION in the issues of _____

January 14th, 1991

Affiant further says that the said The Florida Times-Union is a newspaper published at Jacksonville, in said Duval County, Florida, and that the said newspaper has heretofore been continuously published in said Duval County, Florida, The Florida Times-Union each day, has been entered as second class mail matter at the postoffice in Jacksonville, in said Duval County, Florida, for a period of one year next preceeding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Sworn to and subscribed before me this 17th _____ day of

January, A.D. 1991

Notary Public, State of Florida at Large. My Commission Expires State of Florida Notary Public Dec. 2, 1994. DA 444 My Commission Expires Dec. 2, 1994. Bonded Thru Troy Fain - Insurance 1993

Donna Sapp

State of Florida Department of Environmental Regulation Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a construction permit to Maxwell House Coffee Company, 735 East Bay Street, Jacksonville, Florida 32203, to install a dense phase airveyor to carry off spec beans from reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida. A determination of Best Available Control Technology (BACT) is not required. The Department is issuing this Intent to Issue for reasons stated in the Technical Evaluation and Preliminary Determination. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at: Department of Environmental Regulation Bureau of Air Regulation 2600 Blair Stone Road Tallahassee, Florida 32300-2400 Department of Environmental Regulation Northeast District 7825 Baymeadows Way, Suite B200 Jacksonville, Florida 32256-7577 Department of Health, Welfare and Bio-Environmental Services 421 West Church Street Suite 412 Jacksonville, Florida 32202

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS
123 SOUTH CALHOUN STREET
POST OFFICE BOX 6526
TALLAHASSEE, FLORIDA 32314
(904) 222-7500
FAX (904) 224-8551

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
THOMAS M. DE ROSE
WILLIAM H. GREEN
WADE L. HOPPING
FRANK E. MATTHEWS
RICHARD D. MELSON
WILLIAM D. PRESTON
CAROLYN S. RAEPPEL
GARY P. SAMS
ROBERT P. SMITH, JR.

KATHLEEN BLIZZARD
RICHARD W. MOORE
ANGELA R. MORRISON
MARIBEL N. NICHOLSON
DIANA M. PARKER
LAURA BOYD PEARCE
GARY V. PERKO
MICHAEL P. PETROVICH
DAVID L. POWELL
DOUGLAS S. ROBERTS
CECELIA C. SMITH
CHERYL G. STUART
OF COUNSEL
W. ROBERT FOKES

January 17, 1991

RECEIVED
JAN 17 1991

DER-BAQM

BY HAND-DELIVERY

Ms. Carol Browner, Secretary
c/o Mr. Steve Smallwood, Director
Division of Air Resources Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Maxwell House Coffee Company
Permit No. AC16-184772
Request For Exception and Approval
of Alternative Procedure

Dear Ms. Browner:

Pursuant to Florida Administrative Code Rule 17-2.700(3), Maxwell House Coffee Company ("Maxwell House") respectfully requests that the Department of Environmental Regulation ("Department") determine in writing that the EPA Method 5 source emission test procedure shall not apply to the above-referenced source, and approve a specific alternative visible emission limitation of 5% opacity. As grounds for this request, Maxwell House shows the following:

1. Maxwell House roasts, grinds, and packages coffee at its existing facility in Jacksonville, Duval County, Florida.

2. On August 8, 1990, Maxwell House filed with the Department an application for a permit to install at the existing facility a dense phase airveyor to carry off-specification coffee beans from a reject bin to an existing green (unroasted) bean silo. The off-specification beans are the result of system start ups and occasional operation upsets; presently, the beans are removed manually. The airveyor will require an associated source of air emissions: a custom built Buhler-type "cyclone" with a designated air flow of 300 ACFM. This cyclone will be a minor source of particulate matter emissions, not to exceed 0.24 lbs./hour and 0.99 tons/year.

Ms. Carol Browner
c/o Mr. Steve Smallwood
January 17, 1991
Page 2

3. The Department has released an Intent to Issue air construction permit No. AC16-184772 authorizing installation of the airveyor and cyclone. Pertinent Specific Conditions include the following (in relevant part):

2. Particulate emissions from this facility shall not exceed 0.24 lbs./hr. and 0.99 tons/year.

3. The visible emissions from this cyclone shall not exceed 20% opacity as noted in Specific Condition No. 4.

4. The maximum allowable emission rate and opacity for cyclone D-9 is set by Specific Conditions No. 2 and 3. An alternative standard of a visible emission limitation not to exceed an opacity of 5% in lieu of EPA Method 5 testing may be approved if requested under the provisions of Rule 17-2.700(3)(b), F.A.C. Compliance with the particulate emission rates as specified in Specific Condition No. 2 shall be determined within 30 days of completion of construction and initial operation using EPA Method 5 contained in Rule 17-2.700, F.A.C. However, if a request for an exception and alternative procedure is pending at this point of initial compliance testing, such initial testing shall be held in abeyance until such request is ruled upon.

* * *

(Emphasis added.)

4. Pursuant to Specific Condition No. 4, Maxwell House hereby requests imposition of a visible emission limitation not to exceed 5% in lieu of Method 5 testing. The basis for this request is that the airveyor and cyclone will operate intermittently for very brief periods of time. In order to conduct a viable Method 5 test for particulate matter, three one hour samples need to be taken. Due to the inherent nature of this specific source, there never will be an occasion in which there will be enough product (off-specification beans) to operate the system for three hours.

Ms. Carol Browner
c/o Mr. Steve Smallwood
January 17, 1991
Page 3

5. This is precisely the type of circumstance for which Rule 17-2.700(3) was intended. Indeed, Specific Condition No. 4 in permit No. AC16-184772 demonstrates that the Department anticipated the appropriateness of invoking Rule 17-2.700(3) and imposing a 5% opacity standard in lieu of Method 5 compliance testing.

Wherefore, Maxwell House respectfully requests that the Department determine in writing pursuant to Rule 17-2.700(3) that Method 5 testing shall not be required under permit No. AC16-184772, but instead an alternative visible emission limitation of 5% opacity shall be imposed.

Thank you for considering this request. Please give me a call if you require additional information or if a meeting would be helpful. If you prefer, please feel free to contact John Michel, Maxwell House's Engineering Manager (904-366-3203), or George Whitmer, of Missimer and Associates, who is the project consultant (904-448-6400).

Very truly yours,

HOPPING BOYD GREEN & SAMS

By: *James S. Alves*
James S. Alves

Counsel for Maxwell House
Coffee Company

/kkm:Browner

cc: Clair Fancy, DER ✓

Ronald Roberson, Jacksonville BESD

Gary Smallridge, DER OGC

John Michel, Maxwell House

George Whitmer, Missimer & Associates

M. Baig

A. Kutynow, NEDist

from being returned to you. The return receipt fee will provide you the name of the person to whom the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)

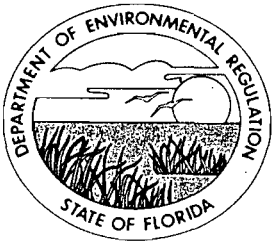
3. Article Addressed to: Mr. James H. Reese Maxwell House Coffee Co. 735 E. Bay St. Jacksonville, FL 32203	4. Article Number P 407 852 916
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

PS Form 3811, Apr. 1989 * U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 407 852 916
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

PS Form 3800, June 1985 * U.S.G.P.O. 1989-234-555

Sent to	James H. Reese
Street and No.	Maxwell HC Co.
P.O., State and ZIP Code	735 E Bay St. Jax, FL 32203
Postage	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	AC 16-184772 1-8-91



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

January 4, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. James H. Reese
Plant Manager
Maxwell House Coffee Company
735 East Bay Street
Jacksonville, FL 32203

Dear Mr. Reese:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for Maxwell House Coffee Company to install a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo.

Please publish the attached "Notice of Intent to Issue" in the legal ad section of a newspaper of general circulation in the area affected and submit the proof of publication to the Department within seven days of publication, along with any written comments, you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/JSA/plm

Attachments

cc: S. L. Alexander, P.E.
Johnny Cole, N.E. District
Ron Roberson, BESD

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Maxwell House Coffee Company
735 East Bay Street
Jacksonville, FL 32203

DER File No. AC 16-184772

INTENT TO ISSUE

The Department of Environmental Regulation hereby give notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Maxwell House Coffee Company, applied on August 8, 1990, to the Department of Environmental Regulation for a permit to install a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of the General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

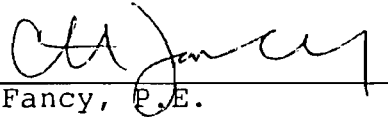
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests

will be affected by any decision of the Department with regard to the applicant have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of the General Counsel the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



C.H. Fancy, P.E.

Chief

Bureau of Air Regulation

Copies furnished to:

S. L. Alexander, P.E.
Johnny Cole, NE District
Ron Roberson, BESD

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 1-8-91.

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Ann Baker
Clerk

1-8-91
Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a construction permit to Maxwell House Coffee Company, 735 East Bay Street, Jacksonville, Florida 32203, to install a dense phase airveyor to carry off spec beans from reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida. A determination of Best Available Control Technology (BACT) is not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

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(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

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(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256-7577

Department of Health, Welfare and Bio-
Environmental Services
421 West Church Street
Suite 412
Jacksonville, Florida 32202

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

Technical Evaluation
and
Preliminary Determination

Maxwell House Coffee Company
Jacksonville Plant
Duval County, Florida

Permit Number: AC 16-184772

Florida Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

January 4, 1991

I. Application

A. Applicant

Maxwell House Coffee Company
735 East Bay Street
Jacksonville, Florida 32203

B. Project and Location

Maxwell House Coffee Company has applied for a construction permit to install a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo at the existing Continuous Roasting Process at the Jacksonville plant in Duval County, Florida.

C. Facility Category

The SIC code is 2095 and the SCC code is 3-02-002-99. Maxwell House Coffee Company applied for a construction permit on August 8, 1990 and was deemed complete on December 10, 1990.

II. Project Description

Maxwell House Coffee has applied for a construction permit to install a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo, from where it is fed to either the Probat or Thermal Roasters. The off spec beans result from system start up and occasional process upsets. Formerly, the beans were manually removed. Under the modified system, the beans are airveyed to the green bean silos where the airstream is controlled by a cyclone.

Particulate emissions from this cyclone will be minor. Similar cyclones on the Thermal Stoners emit only 0.042 tons/year. Currently the off spec beans are manually transferred from the reject bin to the green bean silos.

III. Rule Applicability

The existing Maxwell House Coffee plant is located in Jacksonville, Duval County, an area designated non-attainment for ozone, unclassifiable for sulfur dioxide (17-2.430) and particulate matter (17-2.410), and attainment for the other criteria pollutants (17-2.420).

Coffee processing plants are not listed on Table 500-1, Major Facility Categories (List of 28). The plant is a major facility (17-2.100) because the permitted emissions of particulate matter

exceed 250 TPY. Currently 12 air permits have been issued to this facility covering 118 point sources.

The project is not subject to the new source review for non-attainment areas (17-2.510) because the increase in particulate emissions will not exceed the significant emission rates for particulate matter. Actual particulate emissions will be less than one ton per year. The project will be reviewed under 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Non-attainment Requirements.

This project will be subject to a particulate emission limitation of 0.24 lbs./hr. as suggested by the applicant and an annual limit of 0.99 TPY. The Department, pursuant to Rule 17-2.700(3) may issue an order for an alternate sampling procedure if approval is sought by the permittee. The stack test requirements can be waived for a small particulate source under Rule 17-2.700(3)(d) only if the source is equipped with a baghouse. In this case, if the permittee wishes relief from a method and test, then they must request an alternate sampling procedure under Rule 17-2.700(3)(a) and (b).

The project is subject to compliance testing and reporting requirements in accordance with F.A.C. Rule 17-2.700. Compliance testing of this cyclone shall be conducted using EPA Method 9 for visible emissions and EPA Method 5 for particulate.

IV. Source Impact Analysis

A. Emission Limitations

The particulate emissions shall not exceed 0.238 lbs./hr. and 0.99 TPY.

The visible emissions shall be less than 5% opacity.

B. Air Quality Impacts

The Technical Evaluation of this project determined that ambient air monitoring or modeling would not be required to provide reasonable assurance that Florida's air quality standards would not be violated.

V. Conclusion

Based on the information provided by Maxwell House Coffee Company, the Department has reasonable assurance that the proposed construction/installation of a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo at the Continuous Roasting Process at the Jacksonville plant, as

described in this evaluation and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.



Attachments Available Upon Request



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:
Maxwell House Coffee Company
735 East Bay Street
Jacksonville, Florida 32203

Permit Number: AC 16-184772
Expiration Date: June 30, 1991
County: Duval
Latitude/Longitude: 30°19'27"N
81°39'00"W

Project: Dense Phase
Airveyor - Green Bean Silo
Cyclone, Permit ID "D-9"

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. 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 Department and made a part hereof and specifically described as follows:

To install a dense phase airveyor to carry off spec beans from a reject bin to the green bean silo from which it is fed either to Probat or Thermal Roasters at a continuous average flow of 100 lbs./hr. Emissions during the airveying are controlled by a custom built Buhler-type Cyclone at a designed air flow of 300 ACFM. This source is designated as D-9.

This facility is located at 735 East Bay Street, Jacksonville, Duval County, Florida and the UTM coordinates are Zone 17,437.6 km East and 3354.7 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in this General and Specific Conditions.

Attachments are listed below:

1. DER's incompleteness letter dated September 6, 1990.
2. Maxwell House's response received September 25, 1990.
3. DER's incompleteness letter dated October 24, 1990.
4. Maxwell House's partial response received October 25, 1990.
5. Maxwell House's partial response received November 9, 1990.
6. Maxwell House's partial response received December 7, 1990.
7. Maxwell House's partial response received December 10, 1990.

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

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 Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement 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 applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), 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. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use 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.

5. This permit does not relieve the permittee from liability for harm or injury to human health and welfare, animal, plant or aquatic life or property and penalties therefor 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, unless specifically authorized by an order from the Department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

GENERAL CONDITIONS:

related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copy any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. 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.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

GENERAL CONDITIONS:

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 Sections 403.73 and 403.111, Florida Statutes.

10. The 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.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.
- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

GENERAL CONDITIONS:

- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
 - the person responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.
14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. Maxwell House Coffee Company's facility D-9, the dense phase airveyor shall be allowed to operate continuously (i.e., 8760 hrs./yr.).
2. Particulate emissions from this facility shall not exceed 0.24 lbs./hr. and 0.99 tons/year.
3. The visible emissions from this cyclone shall not exceed 20% opacity as noted in Specific Condition No. 4.
4. The maximum allowable emission rate and opacity for cyclone D-9 is set by Specific Conditions No. 2 and 3. An alternative standard of a visible emission limitation not to exceed an opacity of 5% in lieu of EPA Method 5 testing may be approved if requested under the provisions of Rule 17-2.700(3)(b), F.A.C. Compliance with the particulate emission rates as specified in Specific Condition No. 2 shall be determined within 30 days of completion of construction and initial operation using EPA Method 5 contained in Rule 17-2.700, F.A.C. However, if a request for an exception and alternative procedure is pending at this point of initial compliance testing, such initial testing shall be held in abeyance until such request is ruled upon. Compliance with the visible emission limitation shall be determined within 30

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

SPECIFIC CONDITIONS:

days so completion of construction and initial operation using EPA Method 9 contained in Rule 17-2.700, F.A.C. the minimum requirements for stack sampling facilities, source sampling and reporting shall be in accordance with Rule 17-2.700, F.A.C. and 40 C.F.R. 60, Appendix A.

5. Should the Department have any reason to believe the particulate emission standard is not being met, the Department may require that compliance with the particulate emission standards be demonstrated by testing in accordance with F.A.C. Section 17-2.700.

6. No objectionable odors from this facility will be allowed.

7. The Northeast District office and Jacksonville Bio-Environmental Services Division office shall be given written notice at least 15 days prior to compliance testing.

8. All reasonable precautions shall be taken during construction to prevent and control the generation of unconfined emissions of particulate matter in accordance with the provisions in F.A.C. Section 17-2.610(3). These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling.

9. The permittee shall comply with all applicable provisions of Florida Administrative Code Chapters 17-2 and 17-4.

10. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (Rule 17-4.090, F.A.C.).

11. Upon completion of this project, the operation permit (No. AO 16-157749) issued previously may be amended to include this cyclone D-9.

12. An application for an operation permit must be submitted to the Northeast District office and the Jacksonville Bio-Environmental Services Division office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall

PERMITTEE:
Maxwell House Coffee Company

Permit Number: AC 16-184772
Expiration Date: June 30, 1991

SPECIFIC CONDITIONS:

submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day
of _____, 1990

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management

DRAFT
FOR DISCUSSION ONLY

1. <u>INCREASES FROM PROPOSED ALTERATIONS TO THE FACILITY</u>	
a. Four new batch process roasters	<i>Allowable</i> 20.00 TPY <i>Actual is lower</i>
b. Changes to green bean bulk handling process.	3.534 TPY
c. Oil mist afterburner	<u>0.99 TPY</u>
d. TOTAL	24.52 TPY
2. <u>CONTEMPORANEOUS INCREASES</u>	
a. Coffee processor - <i>Green Bean Skimming</i>	7.90 TPY
b. ITR - <i>Continuous Roasting Process</i> <i>Isothermal Roaster</i>	<u>4.423 TPY</u>
c. TOTAL	12.323 TPY
3. <u>CONTEMPORANEOUS DECREASES</u>	
a. Regular coffee roasting	4.818 TPY
	+ 5.650 TPY
	+ <u>0.569 TPY</u>
	<u>11.037 TPY</u>
c. Sig-vac	0.447 TPY
d. Soluble	<u>1.686 TPY</u>
e. TOTAL	13.17 TPY
4. <u>TOTAL INCREASE</u>	<u>23.677 TPY</u>

*Installation of a.
b.
c. / 3 permit applications*

DRAFT
FOR DISCUSSION ONLY

33^{new} emission points now down to 23 emission points

Looking at possible PSD applicability (since EPA concurs w/ DER's redesignation)
also > 250 TPY emissions

DRAFT **MAXWELL HOUSE**
FOR DISCUSSION ONLY **COFFEE**

1. <u>INCREASES FROM PROPOSED ALTERATIONS TO THE FACILITY</u>		
a.	Four new batch process roasters	20.00 TPY
b.	Changes to green bean bulk handling process.	3.534 TPY
c.	Oil mist afterburner	<u>0.99 TPY</u>
d.	TOTAL	24.52 TPY
2. <u>CONTEMPORANEOUS INCREASES</u>		
		<i>RACT-cyclone.</i>
a.	Coffee processor	7.90 TPY
b.	ITR (<i>Continuous Roaster</i>)	<u>4.423 TPY</u>
c.	TOTAL	12.323 TPY
3. <u>CONTEMPORANEOUS DECREASES</u>		
a.	Regular coffee roasting	4.818 TPY
		5.650 TPY
		<u>0.569 TPY</u>
		11.037 TPY
c.	Sig-vac	0.447 TPY
d.	Soluble	<u>1.686 TPY</u>
e.	TOTAL	13.17 TPY
4.	<u>TOTAL INCREASE</u>	<u>23.677 TPY</u>

DRAFT
FOR DISCUSSION ONLY



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

December 7, 1990

RECEIVED
DEC 11 1990
DER-BAQM

C.H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Duval County - A.P.
Maxwell House Coffee Company
AC16-184772

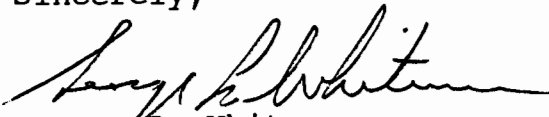
Dear Mr. Fancy:

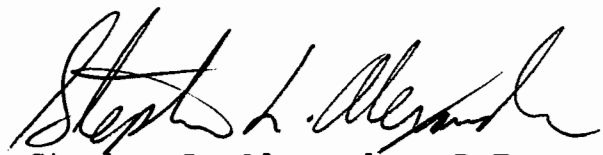
The subject permit application was submitted to your office on July 23, 1990. Since this submittal, numerous letters of incompleteness and replies have been prepared and distributed. The application is presently being held in abeyance due to an unresolved difference of opinion concerning the portion of the application that requests an increase in process flow rate for the ITR from 10,000 to 12,000 lbs/hr.

As the request for a process rate increase does not impact on the requested modification to install a dense phase airveyor and cyclone, we respectfully withdraw that portion of the application addressing increased process rate, and request that DER henceforth consider the application as addressing only the physical alteration of installing a dense phase airveyor and cyclone. The request to increase the process flow rate will be resubmitted as part of a separate application at a later time.

Please give us a call if you have any questions or concerns regarding this letter.

Sincerely,


George L. Whitmer
Manager, Environmental
Compliance Services


Stephen L. Alexander, P.E.
Manager, Environmental
Engineering

cc: Mirza Baig, DER
John Michel, Maxwell House
A. Kutymov, NE Dist
R. Robinson, BESD

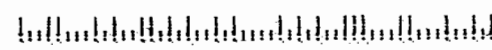
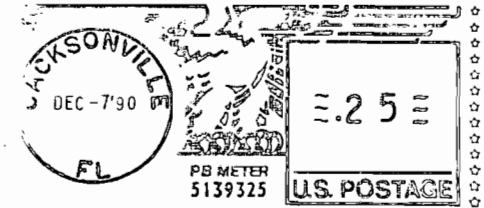


MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

C.H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400





MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
FAX (904) 448-8556

December 7, 1990

C.H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

DEC 07 1990

DER-BAQM

RE: Duval County - A.P.
Maxwell House Coffee Company
AC16-184772

Dear Mr. Fancy:

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Please give us a call if you have any questions or concerns regarding this letter.

Sincerely,

George L. Whitmer
Manager, Environmental
Compliance Services

Stephen L. Alexander, P.E.
Manager, Environmental
Engineering

cc: Mirza Baig, DER
John Michel, Maxwell House

BEST AVAILABLE COPY



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

FAX TRANSMISSION RECEIVED

DEC 10 1990

TO: MIRZA BAIG
EDER-TALLAHASSEE

DATE: DER-BAQM 12/10/90
FAX # 1-922-6979
TIME: _____

FROM: GEORGE WHITMER

NOTE: _____

COVER PAGE AND 2 PAGES TO FOLLOW.

PLEASE CONTACT OUR OFFICE AT (904) 448-6400 IF YOU
HAVE NOT RECEIVED THE COMPLETE TRANSMISSION.

ATTACHMENT 6

SECTION III.H: EMISSION STACK GEOMETRY AND FLOW CHARACTERISTICS

MAXWELL HOUSE COFFEE COMPANY

JACKSONVILLE, FLORIDA

III. H. EMISSION STACK GEOMETRY AND FLOW CHARACTERISTICS:

STACK ID	STACK HEIGHT (FT)	STACK DIAMETER	FLOW (ACFM)	FLOW (DSCFM)	EXIT TEMP. (°F)
D2	93' 8.25"	8"	400	390	87.5°
D3	118' 0.75"	89.6"	28,000	10,000	800°
D4	99' 0.25"	24" x 24"	12,000	11,000	100°
D5	88' 1.75"	4.5"	220	205	100°
D6	86' 11.25"	21"	10,300	9,400	100°
D7	97' 7.25"	8"	270	250	110°
D8	84' 10.875"	15"	3,900	3,700	80°
D9	77' 55"	6"	300	250	100°

Note: Stack geometry and flow characteristics are based upon the most recent compliance testing results.

New source

*— Instantaneous Flow 15,000 lbs/hr
 (Under vacuum for maybe two minutes)
 As per G. Whitman. resi.*

— Continuous average Flow 100 lbs/hr

FROM SHT. 1
ITR ROASTER / COOLER
9985.5

D6 0.11

REWORKING

STAFF TO
RUM
8.89

9876.5
TO SHT. 3
REWORK
BUNKERS

9885.5

100

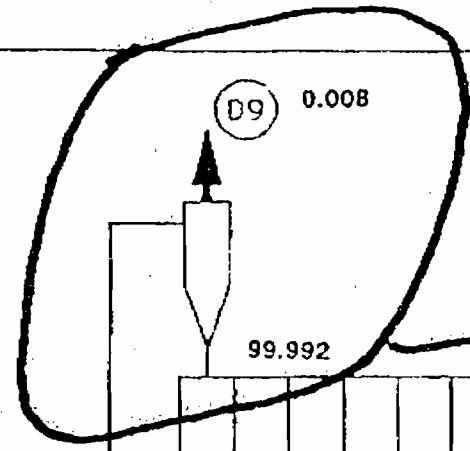
TOTE

TOTE DUMP
STATION

REJECT BIN

ITR
ROASTER / COOLER
DESTONING

ATTACHMENT 7B
PROCESS FLOW DIAGRAM
CONTINUOUS ROASTING PROCESS
MAXWELL HOUSE COFFEE COMPANY



NEW SOURCE

CONTINUOUS
FLOW

99.992

1
GREEN SLO

100

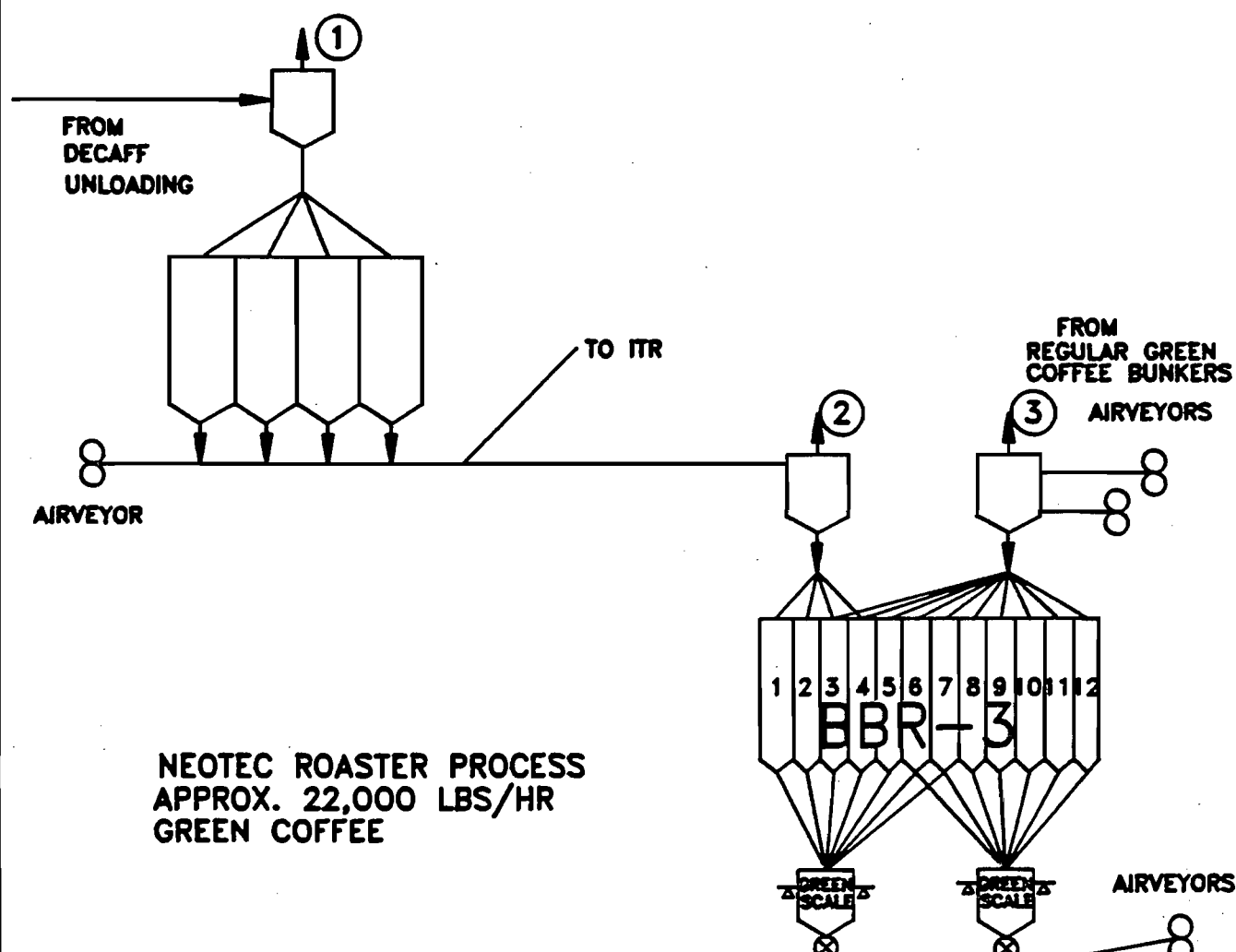
TO PROBAT
ROASTING

DENSE PHASE
AIRVEYOR

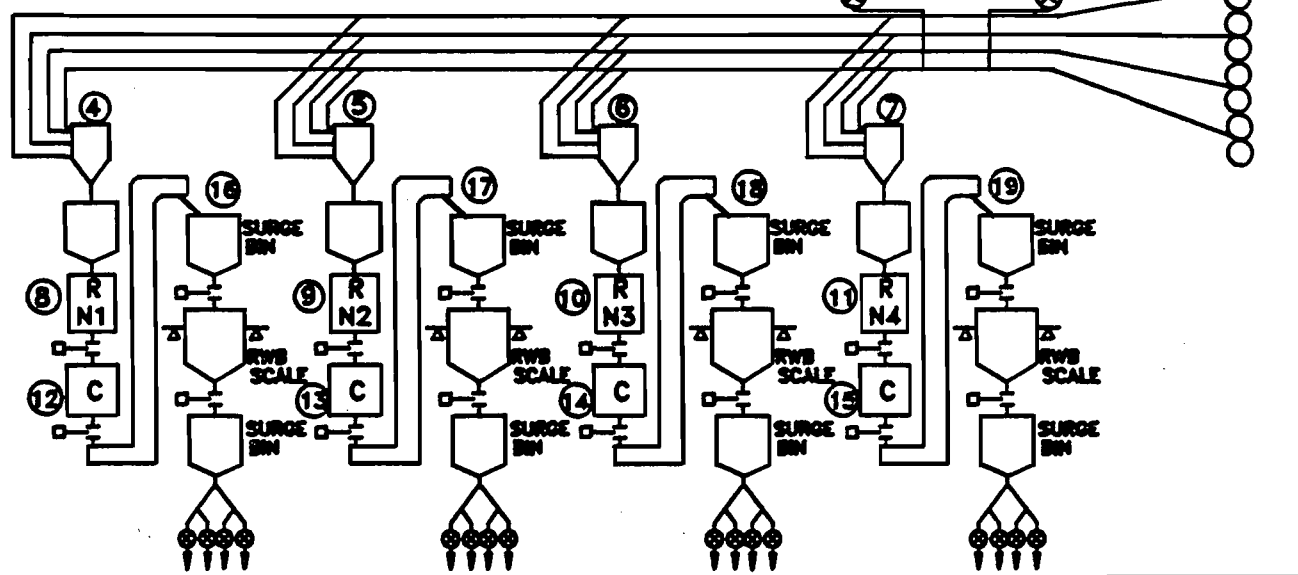
TO THERMALO
ROASTING

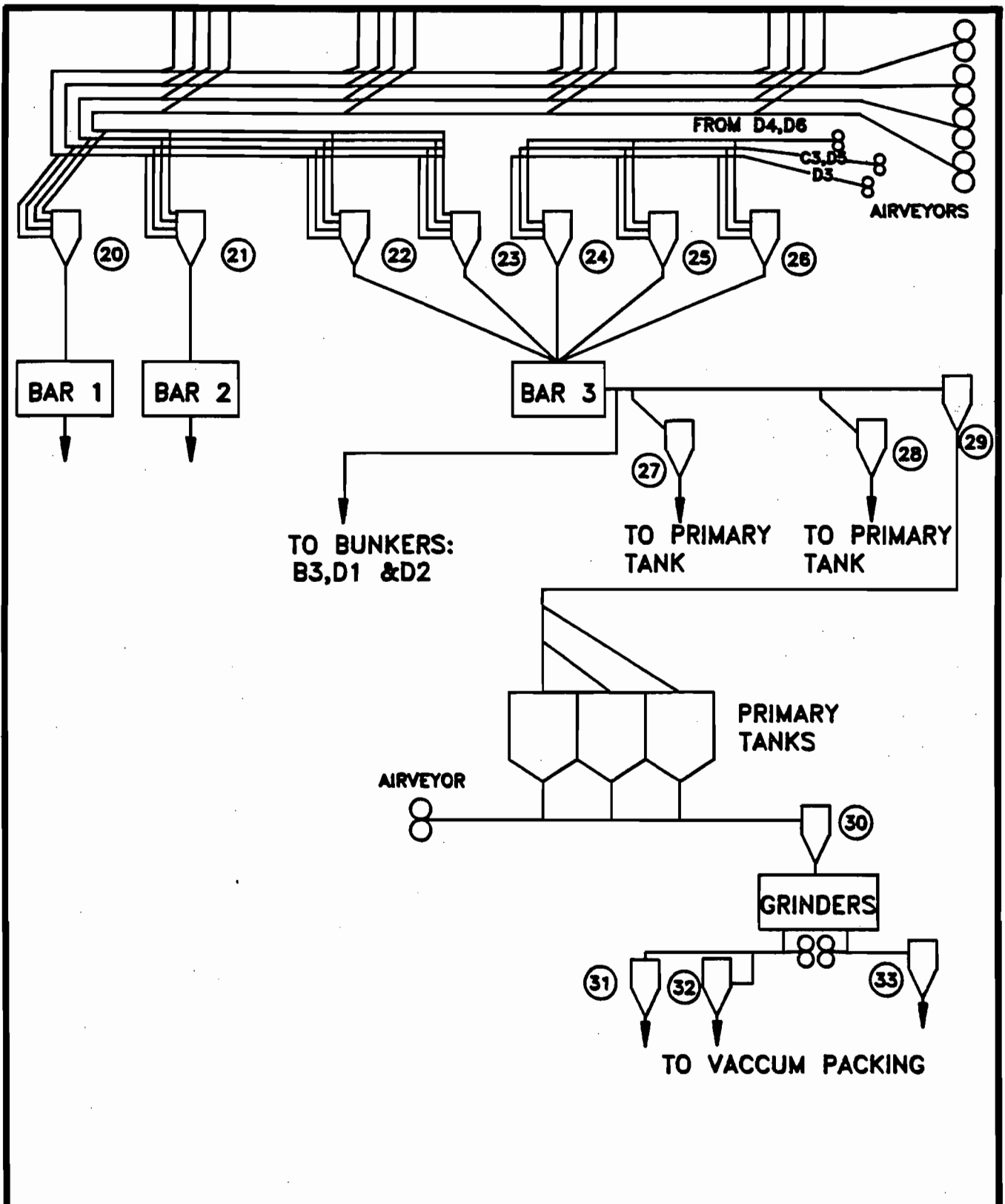
JUNE 20, 1990

SHT 2 OF 3



NEOTEC ROASTER PROCESS
 APPROX. 22,000 LBS/HR
 GREEN COFFEE





HOPPING BOYD GREEN & SAMS

ATTORNEYS AND COUNSELORS

123 SOUTH CALHOUN STREET

POST OFFICE BOX 6526

TALLAHASSEE, FLORIDA 32314

(904) 222-7500

FAX (904) 224-8551

KATHLEEN BLIZZARD

THOMAS M. DE ROSE

RICHARD W. MOORE

ANGELA R. MORRISON

DIANA M. PARKER

AURA BOYD PEARCE

GARY V. PERKO

MICHAEL P. PETROVICH

DAVID L. POWELL

DOUGLAS S. ROBERTS

CECELIA C. SMITH

CHERYL G. STUART

OF COUNSEL

W. ROBERT FOXES

CARLOS ALVAREZ
JAMES S. ALVES
BRIAN H. BIBEAU
ELIZABETH C. BOWMAN
WILLIAM L. BOYD, IV
RICHARD S. BRIGHTMAN
PETER C. CUNNINGHAM
WILLIAM H. GREEN
WADE L. HOPPING
FRANK E. MATTHEWS
RICHARD D. MELSON
WILLIAM D. PRESTON
CAROLYN S. RAEPPEL
GARY P. SAMS
ROBERT P. SMITH, JR.

December 6, 1990

RECEIVED
DEC 10 1990
DER-BAQM

Mr. Clair H. Fancy, P.E.
Chief, Bureau of Air Regulation
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road, Room 306F
Tallahassee, Florida 32399-2400

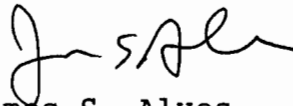
Re: Maxwell House Coffee Company

Dear Clair:

As we have discussed, Maxwell House Coffee Company will soon be filing an application to construct four new roasters and related appurtenances at the existing facility in Jacksonville. The projected changes also will necessitate filing applications to modify a few of the existing air permits. Attached is a letter from Chuck Phillips, President of Maxwell House Coffee Company, which authorizes Plant Manager Jim Reese to sign all applications and related documents on behalf of the Company. We would be most appreciative if you would keep this authorization letter on file. A copy of this letter will be appended to the applications that Maxwell House Coffee Company soon will be filing with the Department.

The folks at Maxwell House and I sincerely appreciate the courtesy and cooperation that has been extended by you and everybody else at the Department.

Very truly yours,



James S. Alves

/kkm:Fancy

cc: John Michel, Maxwell House
George Whitmer, Missimer & Associates



September 26, 1990

To Whom It May Concern:

Subject: Letter of Authorization
Maxwell House Coffee Company

Dear Sir:

This is to advise your office that Jim Reese, Plant Manager, Maxwell House Coffee Company, Jacksonville, Florida, is designated to sign as authorized representative for all environmental permit applications, reports and documents to include air, water, wastewater and solid and hazardous wastes for the Jacksonville facility.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Phillips", with a long horizontal flourish extending to the right.

Chuck Phillips
President

CP:rm



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

RECEIVED
(904) 418-6400
Fax (904) 418-8556

NOV 9 1990

DER-BAQM

November 6, 1990

C.H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: **Duval County - A.P.**
Maxwell House Coffee Company
AC16-184772

- RE:
- (1) Letter to J. Reese, Maxwell House, from C. Fancy, FDER, dated 9/6/90.
 - (2) Letter to C. Fancy, FDER, from G. Whitmer, M&A, dated 9/24/90.
 - (3) Letter to M. Baig, FDER, from G. Whitmer, M&A, dated 10/22/90.
 - (4) Letter to J. Reese, Maxwell House, from C. Fancy, FDER, dated 10/24/90.

Dear Mr. Fancy:

The referenced letters include a letter of incompleteness from the Department concerning the subject permit and our replies to that letter. Reference (4) is the Department's letter requesting further clarification of our replies. Answers to both questions in Reference (4) regarding concerns about grinder capacity and increased emissions from other sources can be answered from the following current operating information.

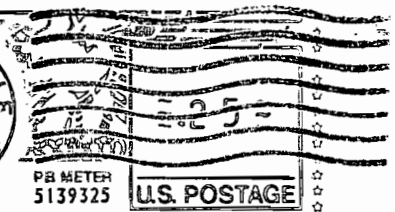
Maxwell House currently has green bean receiving capacity of 45,000 lbs. per hour, green bean storage capacity of almost 2 million pounds, total roasting capacity (with the ITR rate increase) of 41,000 lbs. per hour, grinding capacity of 54,000 lbs. per hour, and packing capacity of 40,000 lb. per hour. The added ITR capacity is needed to address to some extent a change to higher yield coffee (more ITR/less other type) and more importantly, because the ITR requires a significant amount of downtime for maintenance. This requires Maxwell House to run the



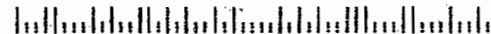
MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256



C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400



100

C.H. Fancy
November 6, 1990
Page 2

ITR faster for shorter periods of time in order to meet production requirements. Since packing capacity will be unchanged until the new lines are installed, the total pounds of coffee produced in the plant will not change. Since all of the other processes operate at much less than capacity, any increase in ITR throughput will have no impact of their permitted or probably actual emissions.

Finally, actual roasted coffee production in the plant has declined over the years due to lower volumes and the soluble (instant) shutdown. Volumes were 94,484 tons in 1988 and 81,617 tons in 1989. Only 13,607 tons of the volume in 1989 were from the ITR. This was the first full year of ITR production. The output for 1990 should be slightly lower than 1989 even with a slightly higher production from ITR.

We trust that this information addresses your concerns regarding the ITR capacity increase, particularly since we will be addressing the plant's total capacity, permit changes, etc. as part of the upcoming expansion. If you still have concerns regarding the capacity increase, Maxwell House will withdraw the permit and resubmit it with only the Roasted Whole Bean Rework change. Since this change offers Maxwell House a significant economic benefit while at the same time reducing potential solid waste, it is important that we receive a construction permit as soon as possible.

Please call John Michel at Maxwell House, or me if you have further questions concerning this request.

Sincerely,

MISSIMER & ASSOCIATES, INC.



George L. Whitmer
Manager
Environmental Compliance Services

GLW/fch

cc: John Michel - Maxwell House

m. Buig
D. Kutynka, NFD
R. Rolerson, BESD
C. Halladay

JAMES S. ALVES

HOPPING BOYD GREEN & SAMS
ATTORNEYS AND COUNSELORS
123 SOUTH CALHOUN STREET
POST OFFICE BOX 6526
TALLAHASSEE, FLORIDA 32314

(904) 222-7500

**MISSIMER & ASSOCIATES, INC.**

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

November 6, 1990

C.H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED

NOV 9 1990

DER-BAQM

Subject: Duval County - A.P.
Maxwell House Coffee Company
AC16-184772

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- (2) Letter to C. Fancy, FDER, from G. Whitmer, M&A, dated 9/24/90.
- (3) Letter to M. Baig, FDER, from G. Whitmer, M&A, dated 10/22/90.
- (4) Letter to J. Reese, Maxwell House, from C. Fancy, FDER, dated 10/24/90.

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Maxwell Coffee - Meeting. 10-30-90.

Slow Roast

Fast Roast ITR

4 New Roasters (Fast or Slow)
Neo-Tech Roasters

3-lb canning line

Overall emissions

Permitted 250 to 300 TPY (Particulate).

allowable ~~actual~~ increase \sim 32 TPY. (4 New Roasters)

Net increase 22 TPY.

> 15 TPY PM_{10} or 25 TPY

New potentials

Coffee Processor - curtailed



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

October 22, 1990

RECEIVED

OCT 25 1990

Mr. Mirza Baig
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DER-BAQM

Subject: Duval County - A.P.
Maxwell House Coffee Company
AC16-184772

RE: 1. Letter to J. Reese, Maxwell House, from C. Fancy, FDER, dated 9/6/90
2. Letter to C. Fancy, FDER, from G. Whitmer, M&A, dated 9/24/90.

Dear Mr. Baig:

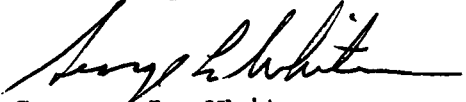
The subject permit modification, dated July 23, 1990, has been in your office for review for some time now. The issue remaining to be resolved is whether the increase in process input rate will increase total emissions over 25 TPY thus requiring New Source Review (NSR).

It appeared from some of your statements, that we may not be looking at the same information. For instance, I did not understand where you got a total PM increase of 24.98 TPY and we got only a 19.33 TPY increase. Therefore, we requested a copy of the Technical Evaluation and Preliminary Determination from your office. It was then that we discovered that the Technical Evaluation was dated August 1, 1986. The application for which this evaluation was prepared was subsequently withdrawn by Maxwell House and a revised permit application was submitted on March 31, 1987. The amended permit was issued by FDER on October 13, 1987. This submittal included the installation of a Venturi scrubber ahead of the afterburner and directing six BAR cyclones from the Regular Coffee Roasting Process and two BAR cyclones and a pelletizer cyclone from the Continuous Roasting Process into a baghouse. The result of the amended permit was a net significant emissions increase of 19.33 tons/year instead of 24.98 tons/year.

A copy of the cover letter and Contemporaneous Emissions Calculations for this application is attached for your information. The Technical Evaluation and Preliminary Determination for the amended permit is what should be reviewed in order for you to properly make a determination on the current permit modification dated July 23, 1990.

Please call me if you have any questions or desire additional information.

Sincerely,



George L. Whitmer
Manager
Environmental Compliance Services

GLW/lis

cc: John Michel - Maxwell House
Jim Alves - Hopping, Boyd, Green & Sams

Attachments

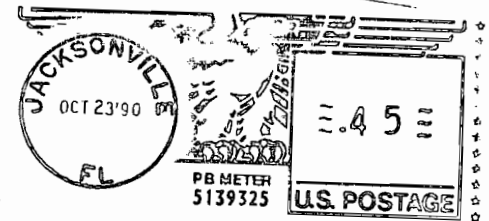
Disk: 2.4
Attachments



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256



Mr. Mirza Baig
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

AMENDMENT I

APPLICATION TO CONSTRUCT

AIR POLLUTION SOURCE

CONTINUOUS ROASTING PROCESS

MAXWELL HOUSE DIVISION

GENERAL FOODS CORPORATION

Prepared by

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.

May 27, 1986

Revised March 31, 1987

**ENVIRONMENTAL SCIENCE
AND ENGINEERING, INC.**

March 31, 1987
ESE Project No. 86026-0002

C. H. Fancy, P.E., Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
1600 Blair Stone Road
Tallahassee, Florida 32301

Subject: **Amendment I**
Application to Construct Air Pollution Source
Continuous Roasting Process (Permit No. AC16-121136)
Maxwell House Division, General Foods Corporation
Jacksonville, Florida

Dear Mr. Fancy:

The amended permit application has been prepared for the Continuous Coffee Roasting Facility at Maxwell House. The original construction permit application was submitted on May 27, 1986. Subsequently, the construction permit was issued on September 30, 1986.

We recently received actual emissions test information from a similar coffee roasting plant which uses a catalytic afterburner. Although the Jacksonville facility will use a thermal afterburner, significantly different from the tested unit, the new information cast doubt upon the ability of the local system to achieve the permitted emission limits. To remove any doubt about the sufficiency of the air emission controls, a Venturi scrubber will be installed ahead of the afterburner. The scrubber is designed to remove particulates to below the 0.03 gr/DSCF RACT limit.

The scrubber will operate very efficiently with respect to particulate removal but may not be as effective for controlling opacity. For this reason, the afterburner is being retained to assure that opacity will be less than 5%. Due to the unusually light duty on the afterburner, we request authorization to operate it at 1000°F instead of 1500°F as defined in Specific Condition No. 5 in the construction permit. At the reduced temperature, the stack gas residence time in the afterburner will be increased more than 35%, i.e., from 1.11 seconds to 1.50 seconds. It is expected that the increased residence time will be more than sufficient to assure compliance with the opacity limit.

C. H. Fancy, P.E., Deputy Chief
Page Two
March 31, 1987

In an effort to further reduce the overall emissions from the Jacksonville plant, six BAR cyclones permitted under the Regular Coffee Roasting Permit (Permit A016-107102) were tied together and ducted into a baghouse along with two BAR cyclones and a pelletizer cyclone from the Continuous Roasting Process. The obvious emissions reduction has been recognized in the contemporaneous emissions calculation (Appendix A). Since this action resulted in reducing the contemporaneous emissions substantially below 25 TPY, we request that Specific Condition No. 10 of the Continuous Roasting Permit be deleted. It is no longer applicable. Such a reduction of allowable emissions from the Coffee Processor (A016-110490) would cause serious operating difficulty because it would not allow any operating margin.

The only other physical change is related to Emission Point No. 6. We have elected to replace one of the original three cyclones with a single baghouse. This action is a trial to evaluate the relative effectiveness of the two devices. However, we have based our calculations for that source on three cyclones. The actual emissions will be lower.

We are understandably anxious to proceed on this project. Since all of the changes documented in this amendment will result in reduced emissions, we will appreciate any effort by your office to expedite its processing.

Please feel free to call me at (904) 739-2007 if you have any questions or require additional information.

Very truly yours,

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.



Lloyd H. Stebbins, P.E.

Manager

Industrial Environmental Department
Jacksonville Regional Office

LHS/cdb

Enclosure(s)
1602-14

APPENDIX A

CONTEMPORANEOUS EMISSIONS CALCULATIONS

MAXWELL HOUSE DIVISION
GENERAL FOODS CORPORATION

JACKSONVILLE, FLORIDA

PARTICULATES

Contributions to Contemporaneous Emissions are:

Coffee Processor (Permit A016-110490)

	<u>Lbs/Hr</u>	
Emission Point #1	0.51	(Allowable, Minor Emission)
Emission Point #2	0.26	(Allowable, Minor Emission)
Emission Point #3	0.53	(Allowable, Minor Emission)
Emission Point #4	1.46	(TSI Test Dated 10/22/85)
Emission Point #5	0.238	(RACT Exempt Value)
	<u>2.998</u>	

$$\frac{2.998 \text{ lbs/hr} \times 8400 \text{ hrs/year}}{2000 \text{ lbs/ton}} = \underline{\underline{12.59 \text{ tons/year}}}$$

Proposed Continuous Roasting Process (Permit AC16-121136)

	<u>Lbs/Hr</u>	
Emission Point #1	0.238	
Emission Point #2	2.57	
Emission Point #3	2.57	
Emission Point #4	0.238	
Emission Point #5	0.238	
Emission Point #6	0.238	
Emission Point #7	0.238	
	<u>6.33</u>	lbs/hr allowable

$$\frac{6.33 \text{ lbs/hr} \times 8400 \text{ hrs/yr}}{2000 \text{ lbs/ton}} = \underline{\underline{26.59 \text{ tons/year}}}$$

Green Bean Steamer and Dryer [A016-31483]

This permit expired 6/85 - Refer to Appendix "B". The process has been totally dismantled as documented on page 3 of the letter in Appendix "C".

APPENDIX A

CONTEMPORANEOUS EMISSIONS CALCULATIONS
(Continued)

Although the old process was permitted according to the process weight table, the credit for contemporaneous emissions is calculated according to the more current RACT limit. The allowable limit is used for this calculation because the emissions were never tested.

Allowable Emission:

$$30,000 \text{ ACFM} \times \frac{532^{\circ}\text{R}}{680^{\circ}\text{R}} \times 0.03 \text{ gr/DSCF} \times 60 \text{ min./hr} \times \frac{1}{7000} \text{ gr/lb} =$$

6.04 lbs/hr.

$$\frac{6.04 \text{ lbs/hour} \times 4 \text{ days} \times 24 \text{ hrs/day} \times 49 \text{ weeks/year}}{2000 \text{ lbs/ton}} = \underline{\underline{14.2 \text{ tons/year}}}$$

Regular Coffee Roasting (A016-107012)

Six BAR cyclones (Refer to Permit A016-107102) will be ducted to a baghouse, listed as Emission Point 7 on the Process Flow Diagram. There is a contemporaneous emissions credit for this reduction based upon the actual emissions for these cyclone emission sources.

$$6 \text{ cyclones} \times \frac{0.942 \text{ tons}}{(\text{year})(\text{cyclone})} = \underline{\underline{5.65 \text{ tons/year}}}$$

Total Contemporaneous Particulate Emissions:

$$12.59 \text{ tons/year} + 26.59 \text{ tons/year} - 14.2 \text{ tons/year} - 5.65 \text{ tons/year} =$$

19.33 tons/year

SULFUR DIOXIDE

Natural Gas

Afterburner:

$$\text{SO}_2 = 0.6 \text{ lbs/MMCF Burned} *$$

$$0.6 \text{ lbs/MMCF} \times 0.0304 \text{ MMCF/hr} \times 8400 \text{ hrs/yr} = 153.22 \text{ lbs/hr}$$

$$153.22 \text{ lbs/hr} \times \frac{1}{2000 \text{ lbs/ton}} = \underline{\underline{0.0766 \text{ tons/yr SO}_2}}$$

APPENDIX A

CONTEMPORANEOUS EMISISONS CALCULATIONS (Continued)

Roaster:

$$\text{SO}_2 = 0.6 \text{ lbs/MMCF Burned*}$$

$$10.5 \text{ MM Btu/hr} = \text{Project Design Data}$$

$$8 \text{ MM Btu/hr} = \text{Normal Operating Rate}$$

$$\frac{10,500,000 \text{ Btu/hr}}{1040 \text{ Btu/SCF}} = 10,096.2 \text{ CF/hr}$$

$$\frac{10,096.2 \text{ CF/hr}}{1,000,000} = 0.01 \text{ MMCF/hr}$$

$$0.6 \text{ Lbs SO}_2/\text{MMCF} \times 0.01 \text{ MMCF/hr} \times 8400 \text{ hr/yr} = 50.4 \text{ lbs/yr}$$

$$50.4 \text{ lbs/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{\underline{0.0252 \text{ tons/yr SO}_2}}$$

NITROGEN OXIDES

Natural Gas

Afterburner:

$$\text{NO}_x = 140.0 \text{ lbs/MMCF Burned *}$$

$$140 \text{ lbs/MMCF} \times 0.0304 \text{ MMCF/hr} \times 8400 = 35,750 \text{ lbs/year}$$

$$35,750 \text{ lbs/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{\underline{17.88 \text{ tons/yr NO}_x}}$$

Roaster:

$$\text{NO}_x = 140.0 \text{ lbs/MMCF Burned *}$$

$$140 \text{ lbs/MMCF} \times 0.01 \text{ MMCF/hr} \times 8400 \text{ hr/yr} = 11,760 \text{ lbs/yr}$$

$$11,760 \text{ lbs/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{\underline{5.88 \text{ tons/yr NO}_x}}$$

* Source: NEDS Source Classification Codes and Emission Factor Listing, USEPA, October 1985.

APPENDIX A
CONTEMPORANEOUS EMISSIONS CALCULATIONS
(Continued)

TOTAL EMISSIONS SUMMARY

<u>PARTICULATES</u>	<u>TONS/YEAR</u>
Coffee Processor	12.59
Proposed Continuous Roasting Process	26.59
Credit: Green Bean Steamer and Dryer	-14.20
Credit: BAR Cyclones (POINTS 103-109)	<u>-5.65</u>
	19.33

SO₂

Natural Gas:	
Afterburner	0.0766
Roaster	<u>0.0252</u>
	0.1018

NO_x

Natural Gas:	
Afterburner	17.88
Roaster	<u>5.88</u>
	23.76

According to F.A.C. 17-2.500(2)(e)2, the Net Significant Emissions increases for the various pollutants which would expose the application to a New Source Review are:

25 tons/year	Particulates
40 tons/year	Sulfur Dioxide
40 tons/year	Nitrogen Oxides

It is clear from the Total Emissions Summary that none of these limits are exceeded.

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. James H. Reese, Plant Manager Maxwell House Coffee Co. 735 East Bay Street Jacksonville, FL 32202	4. Article Number P 256 396 217 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X <i>Jan Rubin</i>	
7. Date of Delivery OCT 26 1990	

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 256 396 217
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

U.S.G.P.O. 1989-234-555

Sent to	Mr. James H. Reese, Maxwell House
Street and No.	735 East Bay St.
P.O., State and ZIP Code	Jacksonville, FL 32202
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	Mailed: 10-24-90 Permit: AC 16-184772

PS Form 3800, June 1985



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

October 24, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James H. Reese, Plant Manager
Maxwell House Coffee Company
735 East Bay Street
Jacksonville, Florida 32202

Re: Duval County - A.P.
Maxwell House Coffee Company
AC 16-184772

Dear Mr. Reese:

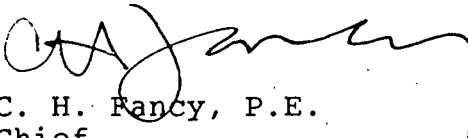
We received your response to the Department's September 6, 1990 incompleteness letter on September 25, 1990. We have reviewed this response and we have deemed it incomplete. Please provide the following information:

1. Was the capacity of the coffee grinder(s) increased? If so, by how much and when?
2. The answer to question number 1 in the Request to Increase Raw Materials Use is incomplete. The information requested is necessary to address whether there is a significant net emissions increase for particulate matter of greater than 25 tons per year. Please submit a list of all air sources with the corresponding permit numbers along with the allowable and actual emissions for the entire facility, before and after the proposed modification.

Processing of your application will continue as soon as the above referenced information has been received.

If you have any questions, please contact Mirza P. Baig at 904-488-1344.

Sincerely,


C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/CH/plm

c: S. L. Alexander, P.E.
J. Cole
J. Woosley

BEST AVAILABLE COPY



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

FAX TRANSMITTAL

TO: MIRZA BAIG
FDBR

DATE: 10/18/90

FAX # 1-922-6979

TIME: 1:45 pm

FROM: GEORGE WHITMOR
MISSIMER & ASSOCIATES, INC.

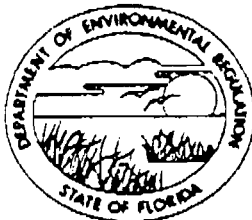
8130 Baymeadows Way West #104
Jacksonville, Florida 32256

NOTE: MAYWELL HOUSE 1989 ANNUAL
OPERATING REPORT FORM FOR CONTINUOUS
ROASTING PROCESS

COVER PAGE AND 2 PAGES TO FOLLOW.

PLEASE CONTACT OUR OFFICE AT (904) 448-6400 IF YOU
HAVE NOT RECEIVED THE COMPLETE TRANSMISSION.
THANK YOU.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION



NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
904/798-4200

BOB MARTINEZ
GOVERNOR
DALE TWACHTMANN
SECRETARY
ERNEST E. GREY
DISTRICT MANAGER
GARY L. SHAFER
ASSISTANT DISTRICT MANAGER

ANNUAL OPERATION REPORT FORM FOR AIR EMISSIONS SOURCES

For each permitted emission point, please submit a separate report for calendar year 1989 prior to March 1st of the following year.

I GENERAL INFORMATION

- 1. Source Name: MAXWELL HOUSE COFFEE COMPANY
- 2. Permit Number: A016-157749
- 3. Source Address: 735 E. BAY STREET
JACKSONVILLE, FL 32202
- 4. Description of Source: CONTINUOUS ROASTING PROCESS

II ACTUAL OPERATING HOURS: * hrs/day * days/wk * wks/yr 3202* Total hours

III RAW MATERIAL INPUT PROCESS WEIGHT: (List separately all materials put into process and specify applicable units if other than tons/yr)

Raw Material	Input Process Weight	
GREEN BEANS	16,008	tons/yr
_____	_____	tons/yr
_____	_____	tons/yr
_____	_____	tons/yr
_____	_____	tons/yr

IV PRODUCT OUTPUT (Specify applicable units)

ROASTED COFFEE	13,607 TPY
_____	_____
_____	_____

BEST AVAILABLE COPY

V TOTAL FUEL USAGE including standby fuels. If fuel is oil, specify type and sulfur content (e.g., No. 6 oil with 1% S).

<u>43.82</u> 10 ⁶ cubic feet Natural Gas	_____ 10 ³ Kerosene
_____ 10 ³ gallons _____ Oil, _____ %S	_____ tons Coal
_____ 10 ³ gallons Propane	_____ tons Carbonaceous
_____ 10 ⁶ Black Liquor Solids	_____ tons Refuse
Other (Specify type and units) _____	

VI EMISSION RATE(S) (tons/yr)

<u>0.989</u> Particulates	_____ Sulfur Dioxide	_____ Total Reduced Sulfur
_____ Nitrogen Oxide	_____ Carbon Monoxide	_____ Fluoride
_____ Hydrocarbon	Other (Specify type and units) _____	

VII METHOD OF CALCULATING EMISSION RATES (e.g., use of fuel and materials balance, emission factors drawn from AP 42, etc.)

PER MCKEE TEST DATED 9/19-29/88

$$0.618 \text{ lb/hr} \times \frac{3202 \text{ hrs/yr}}{2000 \text{ lbs/yr}} = 0.989 \text{ TPY}$$

VIII COMMENTS:

*HOURS ARE SCHEDULED ACCORDING TO BUSINESS CONDITIONS AND NOT ACCORDING TO A SET SCHEDULE

IX CERTIFICATION:

I hereby certify that the information given in this report is correct to the best of my knowledge.

SIGNATURE OF OWNER OR
AUTHORIZED REPRESENTATIVE

JOHN A. MICHEL, ENGINEERING MANAGER
TYPED NAME AND TITLE

DATE

10-17-19

BEST AVAILABLE COPY

Monyu

George Whittman with the consulting firm called me on Maxwell House just before lunch.

He said all they are doing now is replacing a "manual" transfer system for reject beans with a "pneumatic" one. The fugitive indoor emissions are replaced with a stack (0.21 TBY?), no change in plant thru-put or production. I said if that was the case, it looked like they could be permitted by lowering the allowable emissions from one of the sources I permitted by an equal amount. Suggested they explain it all to you. They plan to be over here in about 10 days to discuss future plans at Maxwell House.



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

September 24, 1990

RECEIVED

SEP 25 1990

C.H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation DER-BAQM
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Duval County - A.P.
Maxwell House Coffee Company
AC16-184772

RE: Letter from C.H. Fancy, FDER, to J.H. Reese, Maxwell
House, dated 9/6/90.

Dear Mr. Fancy:

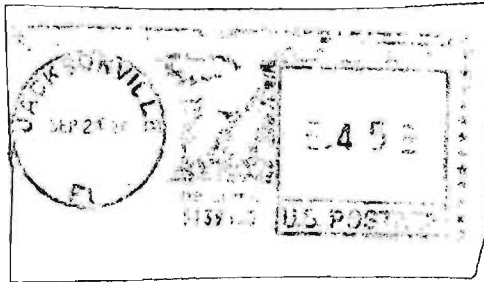
The referenced letter of incompleteness was received by Maxwell House and by Missimer and Associates, Inc. The following information has been prepared in reply to your questions. For your convenience, we have duplicated your questions in boldface in the order they were asked. Our reply follows each individual question.

Dense Phase Airveyor

- 1. Submit a specification sheet for the proposed Buhler Cyclone, which should include the model number.**

Maxwell House contracts construction of all cyclones locally. All cyclones are modeled after specific "off-the-shelf" cyclones currently on the market. The particular cyclone to be permitted in this package was designed after a composite of several Buhler Cyclones. It is not representative of any particular Model Number. A cut sheet is provided in the Attachment.

- 2. According to the information submitted, the proposed cyclone has a six inch diameter stack. Perhaps an eighteen inch diameter stack is desirable so that a particulate stack test can be conducted conveniently. Submit a stack drawing showing the sampling location.**



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

8130 Baymeadows Way West • Suite 104 • Jacksonville, Florida 32256 • Tel. (904) 448-6400

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

CAPE CORAL • MIAMI • TAMPA • JACKSONVILLE

Mr. C.H. Fancy
September 24, 1990
Page 2

The proposed cyclone was designed to vent the airstream from an airveyor carrying offspec beans from a reject bin to the green bean silo. This size cyclone would normally have a six inch diameter stack. An eighteen inch diameter stack is not required in order to conduct a particulate test. Method 1A-Sample and Velocity Traverses for Stationary Sources with Small Stacks or Ducts, in 40 CFR 60, Appendix A, describes how this is accomplished. Many of Maxwell House's existing stacks (including four in this process) are less than eighteen inches diameter.

It is not anticipated that the cyclone will undergo stack testing (Method 5 particulate testing). The offspec bean airveyor and cyclone will operate only intermittently and very erratically. There may be days in which the whole system will only operate three minutes total. On other days, it may operate three to five minutes several times. If the existing Continuous Roasting Process operates perfectly, this cyclone and airveyor will not operate at all. In order to conduct a viable Method 5 particulate test, three one-hour replications of the test must be conducted. There will never be an occasion where there will be enough product (offspec beans) to operate the system for more than a few minutes at a time. Therefore, it is not feasible to provide a stack three times the size that is required in order to install ports for a test that can never be conducted.

Request to Increase Raw Material Use

1. **Submit a list of all air sources with the corresponding permit numbers and expiration dates along with the allowable and actual emissions for the entire facility, before and after the proposed modification.**

There are presently 12 permitted air sources at the Maxwell House Jacksonville facility and approximately 118 APIS emission points. The proposed modification does not impact any permitted sources except the Continuous Roasting Process. Perhaps this information is requested to address a significant net emissions increase. A significant net emissions increase is defined by Rule 17-2.500(2)(e)2., F.A.C., Table 500-2, as 25 tons per year. As this emission point is calculated to increase the emissions by only 0.21 tons per year, contemporaneous emissions calculations for the entire facility are not necessary. However, all air permits for the Maxwell House Jacksonville facility are on file in the FDER office in Tallahassee.

Mr. C.H. Fancy
September 24, 1990
Page 3

2. By increasing the process input rate from 10,000 lbs/hr to 12,000 lbs/hr and the production rate from 10,000 lbs/hr to 10,500 lbs/hr, do you plan to meet the existing PM standards (AO 16-157749) from emission points D-2 through D-8?

The Continuous Roasting Process was designed originally for a throughput of 12,000 lbs/hr. However, when the first compliance test was conducted, process start-up did not allow testing at a minimum of 90% of the permitted capacity. Process input rate was originally permitted at 8900 lbs/hr, the production rate available at start-up. Once the new process was thoroughly proven, the input rate was increased to 10,000 lbs/hr after it was proven by actual emissions testing that permitted emissions standards would be achieved.

As can be determined by the table in Attachment 4A in the permit application, the actual tons per year measured in the particulate tests for emission points D-2 through D-8 are significantly lower than allowed. The increase in process input rate from 10,000 to 12,000 lbs/hr is not expected to increase the emissions from points D-2 through D-8 significantly. The existing emission standards for these points will still be met. This was stated in the engineer's letter accompanying the permit application package.

I trust that this letter answers your questions. These modifications will reduce solid waste generated by the plant by reusing green beans from the reject system. Thousands of dollars will be saved annually allowing the plant to be more competitive in the market place and keep manufacturing jobs in Florida. We are understandably anxious to begin construction. We appreciate your efforts to expedite the processing of this modification package.

Sincerely,

MISSIMER AND ASSOCIATES, INC.



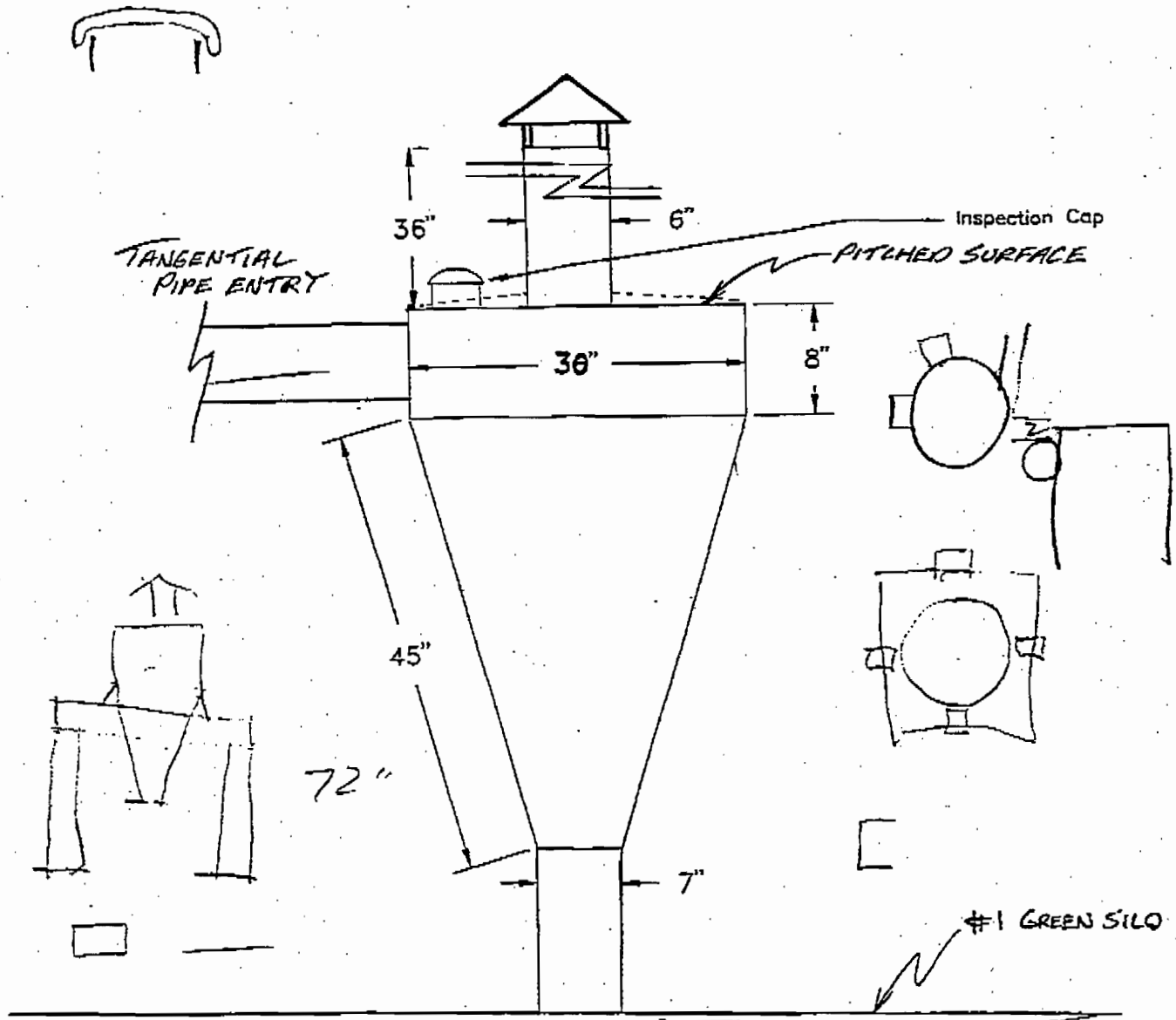
George L. Whitmer
Manager
Environmental Compliance Services

GLW/ljs

Attachment

Disk: 1

cc: M. ^{Boing} WED
D. Cole
R. Robinson BESO



RWB Rework airveyor Recycle Cyclone and Stack

1. Cyclone - fabricate and install.
2. Reject bin - " " "
3. Tote dump hole " " " (similar to MRE dump holes)
4. Diverter installation & spouting.
5. Gate installation & spouting.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: James H. Reese Plant Mgr. TT 735 East Bay Street Jacksonville, Florida 32202 (Maxwell House Coffee Co.)	4. Article Number P 256 396 187 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X <i>[Signature]</i>	
7. Date of Delivery <i>[Signature]</i> 10 SEP 1990	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 256 396 187

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL

James (See Reverse)

* U.S.G.P.O. 1989-234-555

James H. Reese	
Plant Mgr.	
Maxwell House Coffee Co.	
735 East Bay Street	
Jacksonville, FL 32202	
Postage	S
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	S
Postmark or Date mailed: 9/6/90 AC 16-184772	

PS Form 3800, June 1985

File copy



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor Dale Twachtmann, Secretary John Shearer, Assistant Secretary

September 6, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James H. Reese, Plant Manager
Maxwell House Coffee Company
735 East Bay Street
Jacksonville, Florida 32202

Re: Duval County - A.P.
Maxwell House Coffee Company
AC 16-184772

Dear Mr. Reese:

The Department has received a request to increase the process input rate along with a construction permit application for the above referenced projects, and deemed it incomplete. Please provide the following information:

Dense Phase Airveyor

1. Submit a specification sheet for the proposed Buhler Cyclone, which should include the model number.
2. According to the information submitted, the proposed cyclone has a six inch diameter stack. Perhaps an eighteen inch diameter stack is desirable so that a particulate stack test can be conducted conveniently. Submit a stack drawing showing the sampling location.

Request to Increase Raw Material Use

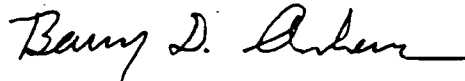
1. Submit a list of all air sources with the corresponding permit numbers and expiration dates along with the allowable and actual emissions for the entire facility, before and after the proposed modification.
2. By increasing the process input rate from 10,000 lbs/hr to 12,000 lbs/hr and the production rate from 10,000 lbs/hr to 10,500 lbs/hr, do you plan to meet the existing PM standards (AO 16-157749) from emission points D-2 thru D-8?

Mr. James H. Reese
September 6, 1990
Page 2

Processing of the application will continue as soon as the above referenced information has been received.

If you have any questions, please contact Mr. Mirza P. Baig of my staff at (904)488-1344.

Sincerely,



for C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/MB/plm

c: S. L. Alexander, P.E.
J. Cole
J. Woosley

Ready File }
Mirza Baig } 9-6-90 AM



Florida Department of Environmental Regulation

Northeast District • 3426 Bills Road • Jacksonville, Florida 32207 • 904-798-4200

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary
Ernest Frey, Deputy Assistant Secretary



Mr. George L. Whitmer, Manager
Environmental Compliance Services
Missimer & Associates, Inc.
Suite 104
8130 Baymeadows Way West
Jacksonville, FL 32256

**RE: Duval County - Air Pollution
Maxwell House Coffee Company
Continuous Roasting Process
Permit No. A016-157749
I.D. No. 31-16-0004-(D2-D8)
Permit Revision**

Dear Mr. Whitmer:

The Bio-Environmental Services (BESD) and the Department of Environmental Regulation (DER) have approved the revision of the captioned permit(s) as follows:

SPECIFIC CONDITION NO. 13

From: Green bean input to the continuous roaster system shall not exceed 8,900 lbs/hr. Production shall not exceed 8,500 lbs/hr. Compliance with this condition shall be determined from the bean and product scales data.

To: Green bean input to the continuous roaster system shall not exceed 10,000 lbs/hr. Production shall not exceed 10,000 lbs/hr. Compliance with this condition shall be determined from the green bean and scales data.

CONSOLIDATED CITY OF JACKSONVILLE, FLORIDA

OFFICE MEMO

- TO MIRZA BAIG
- FROM RON ROBERSON
- SUBJECT MAXWELL HOUSE COFFEE CO.

DATE 8/28/90

RECEIVED

AUG 30 1990

DER-BAQM

PLEASE FIND ATTACHED A COPY OF PERMIT
A016-157749 - CONTINUOUS ROASTING PROCESS
PER YOUR REQUEST.

REPLY REQUESTED

SPECIFIC CONDITION NO. 14

From: The continuous roaster process shall not be operated commercially unless the temperature in the combustion chamber of the afterburner is at least 1,200^oF. The unit shall be equipped with instruments to measure its temperature. The temperature of the combustion chamber shall be recorded at 12-hour intervals. Tests may be conducted on the afterburner at temperatures as low as 1,000^oF if BESD or the department's approval is obtained prior to each test.

To: The continuous roaster process shall not be operated commercially unless the temperature in the combustion chamber of the afterburner is at least 800^oF. The unit shall be equipped with instruments to measure its temperature. The temperature of the combustion chamber shall be recorded at 12-hour intervals.


This letter and Missimer & Associates, Inc. letter dated April 20, 1990 shall be attached to and become part of the captioned permit.

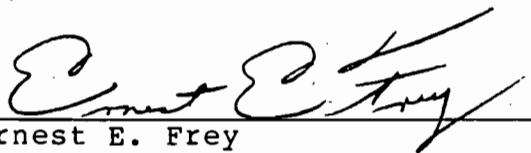
Any questions in this matter should be directed to Mr. Ronald L. Roberson at (904) 630-3666.

Very truly yours,

City of Jacksonville
Department of Health, Welfare,
and Bio-Environmental Services

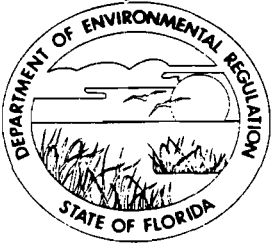
State of Florida
Department of Environmental
Regulation


James L. Manning, P.E.
Deputy Director


Ernest E. Frey
Deputy Assistant Secretary

cc: Mr. Andrew G. Kutyna, P.E., DER
Mr. Wayne Walker, BESD
Mr. Kelly Roberts, BESD
BESD Air Permitting Files
BESD File 1820-R

JLM/EEF:nc



Florida Department of Environmental Regulation

Northeast District • 3426 Bills Road • Jacksonville, Florida 32207 • 904-798-4200

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary
Ernest Frey, Deputy Assistant Secretary

Permittee:

General Foods Mfg. Corp.
Maxwell House Division
Post Office Box 2010
Jacksonville, FL 32203

LD. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

County:

Latitude/Longitude:

UTM:

Project:

Revised:

31-16-0004-D2,D3,D4,D5,D6,D7,D8

AO16-157749

February 9, 1989

December 31, 1993

Duval

30:19:27/81:39:00

E-7437.5 N-3354.7

Continuous Roasting Process

July 10, 1989

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. 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 department and made a part hereof and specifically described as follows:

For the operation of a 5 TPH (green bean) continuous roaster. Major components of the coffee roaster are: a green bean feed system consisting of a cyclone, two (2) surge bins, scale, and baghouse; a natural gas fired continuous roaster, three (3) cyclones, a venturi scrubber, and an afterburner; a stoner system that includes a cyclone, two (2) surge bins, a scale, and two (2) baghouses; a product storage system consisting of four (4) cyclones, one (1) baghouse, and five (5) bunkers; three (3) cyclones connected to the existing BAR system; a pelletizer cyclone, hopper, feed cleaner, and pelletizer; and a baghouse controlling the emissions from the pelletizer cyclone and six (6) BAR cyclones in the regular coffee roasting process.

Particulate Matter (PM) emissions shall be controlled as follows:

Source

Green Bean Feed System D2
Continuous Roaster P3
Continuous Roaster Cooling Section D4
Stoner Handling System D5
Stoner System D6
Product Storage D7

Pelletizer and BAR Systems D8

Control Equipment

Buhler-Miag Baghouse
Ross-Waldron Afterburner IN6011025-1
Ducon Model 700/150 Cyclone
Buhler-Miag Baghouse Model RPPR 7/3
Buhler-Miag Baghouse
Dalamic Baghouse DLM - V7/7W
Ducon Model 700/150 Cyclones
Buhler-Miag Baghouse Model RPPR 7/3

Emission source(s) shall be as follows:

Point

D2
D3
D4
D5
D6
D7
D8

Source

Green Bean Feed System
Continuous Roaster
Continuous Roaster Cooling Section
Stoner Handling System
Stoner System
Product Storage
Pelletizer and BAR Systems

Permittee:
General Foods Mfg. Corp.
Maxwell House Division

LD. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:
Revised:

31-16-0004-D2,D3,D4,D5,D6,D7,D8
AO16-157749
February 9, 1989
December 31, 1993
July 10, 1989

Located at 735 East Bay Street, Jacksonville, Florida

Supporting documents shall be as follows:

- (1) Certificate of Completion of Construction received November 15, 1988
- (2) Permit No. AC16-121136
- (3) Hopping, Boyd, Green & Sams' letter dated February 24, 1989
- (4) Bio-Environmental Services Division's (BESD) letter dated March 10, 1989
- (5) Hunter Environmental Service (HES), Inc.'s letter dated March 16, 1989
- (6) BESD's letter dated April 27, 1989
- (7) HES's letter dated May 16, 1989

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 Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement 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 applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.
3. As provided in Subsections 403.087(6) and 403.722(5), 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. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use 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.
5. 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 penalties 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, unless specifically authorized by an order from the department.
6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

Permittee:	LD. Number:	31-16-0004-D2,D3,D4,D5,D6,D7,D8
General Foods Mfg. Corp.	Permit/Certification Number:	AO16-157749
Maxwell House Division	Date of Issue:	February 9, 1989
	Expiration Date:	December 31, 1993
	Revised:	July 10, 1989

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:
- Having access to and copying any records that must be kept under the conditions of the permit;
 - Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
 - Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. 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 description of and cause of non-compliance; and
 - 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.

9. In accepting this permit, the permittee understands and agrees that all reports, 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 Sections 403.73 and 403.111, Florida Statutes.
10. The 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.
11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.
12. This is required to be kept at the work site of the permitted activity during the entire period of construction or operation.
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)
 - () Compliance with New Source Performance Standards

Permittee:

General Foods Mfg. Corp.
Maxwell House Division

L.D. Number:**Permit/Certification Number:****Date of Issue:****Expiration Date:****Revised:**

31-16-0004-D2,D3,D4,D5,D6,D7,D8

AO16-157749

February 9, 1989

December 31, 1993

July 10, 1989

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.
- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report, or application unless otherwise specified by department rule.
- c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;
 - the person, responsible for performing the sampling or measurements;
 - the date(s) analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.**SPECIFIC CONDITIONS:**

1. Permittee shall notify the Bio-Environmental Services Division (BESD) fifteen (15) days prior to source testing in accordance with Rule 17-2.700(2)(a)5., Florida Administrative Code (FAC), and Rule 2.501, Jacksonville Environmental Protection Board (JEPB).
2. Copies of the test report(s) shall be submitted to BESD within forty-five (45) days of completion of testing in accordance with Rule 17-2.700(7)(b), FAC, and Rule 2.501, JEPB.
3. Testing of emissions shall be accomplished at a minimum of 90% of the permitted capacity. If testing is performed at a rate less than 90% of the permitted capacity, operation shall be limited to a maximum of 110% of the tested capacity until such time as an acceptable test is performed at a minimum of 90% of the permitted capacity. When operation is restricted to a lower capacity because of testing at such a level, BESD, upon advanced notification, will allow operation at higher capacities if such operation is for demonstrating compliance at a higher capacity.
4. Any revision(s) to a permit (and application) shall be submitted and approved prior to implementing.
5. Control equipment shall be provided with a method of access that is safe and readily accessible.
6. Stack sampling facilities shall be required and shall comply with the requirements of Rule 17-2.700(4), FAC, and Rule 2.207, JEPB.

Permittee:
 General Foods Mfg. Corp.
 Maxwell House Division

LD. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:
Revised:

31-16-0004-D2,D3,D4,D5,D6,D7,D8
 AO16-157749
 February 9, 1989
 December 31, 1993
 July 10, 1989

7. Permittee shall submit an annual report to BESD for this source on the form supplied for each calendar year on or before March 1 in accordance with Rule 17-4.140, FAC.
8. The following pollutant(s) shall be tested at intervals indicated from the date of October 1, 1988:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>Interval</u>	<u>Test Method</u>
D2	Particulate Matter (PM)	2 Years	EPA Reference Method (RM) 5
	Visible Emissions (VE)	12 Months	EPA RM 9
D3	PM	2 Years	EPA RM 5
	VE	12 Months	EPA RM 9
D4	PM	2 Years	EPA RM 5
	VE	12 Months	EPA RM 9
D5	PM	2 Years	EPA RM 5
	VE	12 Months	EPA RM 9
D6	PM	2 Years	EPA RM 5
	VE	12 Months	EPA RM 9
D7	PM	2 Years	EPA RM 5
	VE	12 Months	EPA RM 9
D8	PM	2 Years	EPA RM 5
	VE	12 Months	EPA RM 9

9. The applicable emission limiting rules shall be as follows:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>¹FAC</u>	<u>²JEPB</u>	<u>Other</u>
D2	PM	17-2.650(2)(b)3.	2.207	
	VE	17-4.070(3)		
D3	PM	17-2.650(2)(c)12.	2.207	
	VE	17-2.650(2)(c)12.	2.207	
D4	PM	17-2.650(2)(c)12.	2.207	
	VE	17-2.650(2)(c)12.	2.207	
D5	PM	17-2.650(2)(b)3.	2.207	
	VE	17-4.070(3)		
D6	PM	17-2.650(2)(b)3.	2.207	
	VE	17-4.070(3)		
D7	PM	17-2.650(2)(b)3.	2.207	
	VE	17-4.070(3)		
D8	PM	17-2.650(2)(b)3.	2.207	
	VE	17-4.070(3)		
D2-D8	Objectionable Odors (OO)	17-2.620(2)	2.205(a)	

10. The maximum allowable emissions shall be as follows:

<u>Pt. No.</u>	<u>Pollutant</u>	<u>lbs/hr</u>	<u>T/yr</u>	<u>Other</u>	<u>Opacity</u>
D2	PM	0.238	0.99		
	VE				5%
	OO			None Allowed	

Permittee:
General Foods Mfg. Corp.
Maxwell House Division

LD. Number:
Permit/Certification Number:
Date of Issue:
Expiration Date:
Revised:

31-16-0004-D2,D3,D4,D5,D6,D7,D8:
AO16-157749
February 9, 1989
December 31, 1993
July 10, 1989

D3	PM VE OO	2.57	10.79	0.03 gr/DSCF	5%
D4	PM VE OO	2.57	10.79	0.03 gr/DSCF	5%
D5	PM VE OO	0.238	0.99	None Allowed	5%
D6	PM VE OO	0.238	0.99	None Allowed	5%
D7	PM VE OO	0.238	0.99	None Allowed	5%
D8	PM VE OO	0.238	0.99	None Allowed	5%

11. Operation shall be limited to 8400 hours per year.
12. Only natural gas shall be used for fuel in the roaster and afterburner. Fuel consumption by the afterburner shall be limited to 0.016×10^6 ft³/hr of natural gas. Fuel consumption in the roaster shall be limited to 0.01×10^6 ft³/hr of natural gas. The permittee shall keep a log of the fuel meter readings.
13. Green bean input to the continuous roaster system shall not exceed 8,900 lbs/hr. Production shall not exceed 8,500 lbs/hr. Compliance with this condition shall be determined from the green bean and product scales data.
14. The continuous roaster process shall not be operated commercially unless the temperature in the combustion chamber of the afterburner is at least 1,200 °F. The unit shall be equipped with instruments to measure its temperature. The temperature of the combustion chamber shall be recorded at 12-hour intervals. Tests may be conducted on the afterburner at temperatures as low as 1,000 °F if BESD or the department's approval is obtained prior to each test.
15. Only 1 of the 5 air pollution control units for the product bunker shall be in service at any given time.
16. Only 1 of the 3 cyclones to the existing BAR system shall be in service at any given time.
17. All waste generated by this operation shall be disposed of in an environmentally sound manner that complies with all applicable regulations.
18. An Operation and Maintenance Plan shall be attached to and shall be part of this permit in accordance with Rule 17-2.650(2)(g), Florida Administrative Code. All activities shall be performed as scheduled and recorded data made available to BESD upon request. Records shall be maintained on file for a minimum period of two (2) years.

Permittee:

General Foods Mfg. Corp.
Maxwell House Division

LD. Number:

Permit/Certification Number:

Date of Issue:

Expiration Date:

Revised:

31-16-0004-D2,D3,D4,D5,D6,D7,D8

AO16-157749

February 9, 1989

December 31, 1993

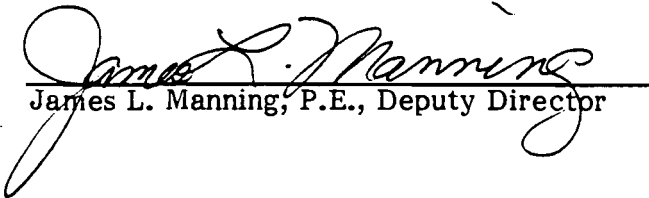
July 10, 1989

- 19. The permittee shall apply for a renewal operation permit sixty (60) days prior to the expiration date of this permit in accordance with Rule 17-4.090, FAC. Failure to submit a renewal application sixty (60) days prior to the expiration date shall result in the assessment of a penalty in accordance with Section 360.701(a)19., Ordinance Code.

City of Jacksonville
Department of Health, Welfare, and
Bio-Environmental Services

Issued this 9 day of February, 1989
Revised this 10 day of July, 1989

State of Florida
Department of Environmental Regulation


James L. Manning, P.E., Deputy Director


Ernest E. Frey, Deputy Assistant Secretary

¹Florida Administrative Code

²Jacksonville Environmental Protection Board

AC16-184772

APPLICATION TO CONSTRUCT
AIR POLLUTION SOURCE

CONTINUOUS ROASTING PROCESS
MODIFICATION

MAXWELL HOUSE COFFEE COMPANY

Prepared by:

Missimer and Associates, Inc.
8130 Baymeadows Way, West
Suite 104
Jacksonville, Florida 32256

July 23, 1990

Project Number JE0045



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

August 7, 1990

C. H. Fancy, P.E., Bureau Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32399-2400

RECEIVED
DER-MAIL ROOM
1990 AUG - 8 PM 1: 32

Subject: Construction Permit Application Packet

Dear Mr. Fancy:

Enclosed are four copies of an Application to Construct an Air Pollution Source for the Maxwell House Coffee Company. According to the attached fee schedule a source which emits less than 25 tons per year requires a \$200 application processing fee. A \$200.00 check is also enclosed with this packet.

If you have any questions, please contact me.

Sincerely,

Mark Rinaman
Mark R. Rinaman
Project Manager

*\$ Check with
this copy*

MRR/lr

Enclosure

001031

RECEIVED
DER-MAIL ROOM
1990 AUG - 9 AM 11: 32

MISSIMER & ASSOCIATES, INC.

1044

OUR REF. NO.	YOUR INV. NO.	INVOICE DATE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
		8-2-90	\$200.00	\$200.00		\$200.00

MISSIMER & ASSOCIATES, INC.

8130 BAYMEADOWS WAY WEST
SUITE 104
JACKSONVILLE, FL 33216

SOUTHEAST BANK, N.A.
WHISKEY CREEK BANKING CENTER
FT. MYERS, FL 33919 63-58/660

1044

CHECK DATE	CONTROL NO.	CHECK AMOUNT
8-2-90		\$200.00

PAY TWO HUNDRED AND NO/100-----

TO THE ORDER OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION
2600 BLAIR STONE RD.
TALLAHASSEE, FL 32399-2400

MISSIMER & ASSOCIATES, INC.

Cindy Bates



Department of Environmental Regulation
Air Pollution
Permit Processing Fees

A. Construction Permits

(a) less than 25 tons/year	\$ 200.00
(b) 25 or more tons/yr but less than 50 tons/yr	500.00
(c) 50 or more tons/yr but less than 100 tons/yr	1000.00
(d) 100 or more tons/yr	2500.00

B. Operating Permits

(a) Source required to measure actual emissions by stack sampling	1500.00
(b) Source required to measure actual emissions by any method other than stack sampling	750.00
(c) Source not required to measure actual emissions	250.00

Permit processing fees are determined by the highest potential emissions of any single pollutant.

All checks must be for individual permit applications and made payable to "Department of Environmental Regulation."

Fees were established pursuant to Chapter 20 Florida Statutes. The processing fee is non-refundable except as provided for in Section 120.60, Florida Statutes.



GENERAL FOODS WORLDWIDE
COFFEE & INTERNATIONAL

Maxwell House Coffee Company

July 23, 1990

C. H. Fancy, P.E., Bureau Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Subject: **Construction Permit Modification
Continuous Roasting Process**

Dear Mr. Fancy:

As you are aware, the modernization program we have been involved in has matured and we are currently in the process of fine tuning our coffee roasting facilities. Reductions in emissions have been realized from our modernization program and Maxwell House will attempt to reap the production benefits that the modernization program also has to offer. Fine tuning will include the installation of an airveyor for offspec green beans and process changes which will increase throughput and reduce fuel consumption.

The design change involves the installation of an airveyor to recycle offspec beans. This replaces a less efficient manual method currently used. A cyclone will be used to remove particulates from the airstream. The corresponding design changes are described in the modification package.

Since the modernization program has contributed significantly to a reduction in emissions we are hopeful that you will be able to expedite the processing of this modification.

Sincerely,

James H. Reese
Plant Manager

JHR/las

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CONTINUOUS ROASTING PROCESS
MAXWELL HOUSE COFFEE COMPANY

OWNER'S LETTER

PROFESSIONAL ENGINEER'S LETTER

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ATTACHMENT 1 SECTION IA, LETTER OF AUTHORIZATION

ATTACHMENT 2 SECTION IIA, PROCESS DESCRIPTION

ATTACHMENT 3 SECTION III A & B, RAW MATERIALS AND PROCESS
RATE DATA

ATTACHMENT 4 SECTION III C & D, EMISSIONS, CONTROL DEVICES
AND CALCULATIONS

ATTACHMENT 5 SECTION III E, CALCULATION OF FUEL CONSUMPTION
AND HEAT INPUT RATE

ATTACHMENT 6 SECTION III H, EMISSIONS STACK GEOMETRY AND FLOW
CHARACTERICS

ATTACHMENT 7 PROCESS FLOW DIAGRAM (SHEETS A, B AND C)

ATTACHMENT 8 LOCATION MAP - USGS TOPOGRAPHIC MAP:
JACKSONVILLE QUADRANGLE

ATTACHMENT 9 PLOT PLAN

ATTACHMENT 10 MCKEE TEST REPORT, 02/26 - 03/05/90

ATTACHMENT 11A VENDOR'S DATA, EMISSION POINT D2
BUHLER-MIAG BAGHOUSE

ATTACHMENT 11B VENDOR'S DATA, EMISSION POINT D3
VENTURI SCRUBBER

ATTACHMENT 11C VENDOR'S DATA, EMISSION POINT D3
ROSS-WALDRON AFTERBURNER

ATTACHMENT 11D VENDOR'S DATA, EMISSION POINT D3
VENTURI SCRUBBER PURGE FILTER

ATTACHMENT 11E VENDOR'S DATA, EMISSION POINT D4
DUCON CYCLONE

ATTACHMENT 11F VENDOR'S DATA, EMISSION POINT D5
BUHLER-MIAG BAGHOUSE

ATTACHMENT 11G VENDOR'S DATA, EMISSION POINT D6
BUHLER-MIAG BAGHOUSE

ATTACHMENT 11H VENDOR'S DATA, EMISSION POINT D7
 DALAMATIC BAGHOUSE

ATTACHMENT 11I VENDOR'S DATA, EMISSION POINT D8
 BUHLER-MIAG BAGHOUSE

ATTACHMENT 11J VENDOR'S DATA, NEW EMISSION POINT D
 CYCLONE



MISSIMER & ASSOCIATES, INC.

Environmental and Groundwater Consultants

Suite 104
8130 Baymeadows Way West
Jacksonville, Florida 32256

(904) 448-6400
Fax (904) 448-8556

July 23, 1990

C.H. Fancy, P.E., Bureau Chief
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, FL 32399-2400

**Subject: Construction Permit Modification
Continuous Roasting Process
Permit No. A016-157749
Maxwell House Coffee Company**

Dear Mr. Fancy:

A modification to the existing Continuous Roasting Process is attached. The existing permit was issued on February 9, 1989, revised on July 10, 1989 and expires on December 31, 1993. A further revision to Specific Conditions 13 and 14 was received but is undated.

Two modifications are requested. One involves the installation of a dense phase airveyor to carry offspec beans from a reject bin to the green bean silo. The offspec beans result from system start up and occasional process upsets. Formerly the beans were manually removed. Under the modified system, the beans are airveyed to the green bean silos and fed to either the Probat or Thermal Roasters. The airstream vented from the airveyor is controlled by a cyclone. The other modification is to increase permitted raw material use from 10,000 lb/hr to 12,000 lb/hr.

Particulate emissions from the new emission point will be minor. Similar cyclones on the Thermal Stoners emit only 0.042 ton/yr. Therefore, this emission point will be exempt from the RACT requirements according to Rule 17-2.650(2)(b)3. Emissions will be much less than one ton per year.

Although the plant is located in a non-attainment area for particulates, an emission offset is not required because the net increase in emissions is not sufficient to expose the application to a New Source Review.

For the purpose of this modification application we have chosen to name the new emission point D9. The last APIS emission point for this process was given the number D8 by FDER.

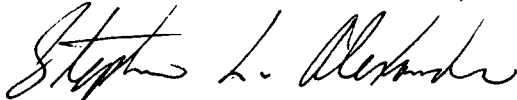
Mr. C.H. Fancy
July 23, 1990
Page 2

We have had previous revisions to the existing permit to increase green bean input to the roaster from 8,900 lbs/hr to 10,000 lbs/hr, to increase production from 8,500 lbs/hr to 10,000 lbs/hr and to reduce the temperature in the combustion chamber of the afterburner from 1,200°F to 800°F. Permission has been granted by BESD to test the emissions from the afterburner at input and production rates of 12,000 lbs/hr. We have been able to easily demonstrate compliance at increased input and production and decreased temperatures thus far. We are confident that a further increase to 12,000 lbs/hr will also demonstrate compliance. Therefore, we have based the material balance on the Process Flow Diagram (Attachments 7A, 7B, 7C) on a 12,000 lb/hr green bean input to the system.

We are very anxious to construct this modification. Maxwell House will save thousands of dollars per year with the modification, allowing the plant to be more competitive in the world market. It will also reduce waste by reusing green beans from the reject system. We would appreciate your efforts to expedite the processing of this modification package.

Sincerely,

MISSIMER AND ASSOCIATES, INC.



Stephen L. Alexander, P.E.
Manager, Environmental Engineering

SLA/lis

Attachment

#200pd.
8-8-90
Rept. #151153

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



AC 16-184772

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Continuous Roaster [] New¹ [X] Existing¹

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

COMPANY NAME: Maxwell House Coffee Company COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Line

Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Continuous Roaster

SOURCE LOCATION: Street 735 East Bay Street City Jacksonville

UTM: East 437.548 North 3,354.714

Latitude 30° 19' 27"N Longitude 81° 39' 00"W

APPLICANT NAME AND TITLE: Maxwell House Coffee Company

APPLICANT ADDRESS: 735 East Bay Street, Jacksonville, Florida

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

Maxwell House
Coffee Company

I am the undersigned owner or authorized representative* of Maxwell House Coffee Company

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

Defer to Attachment I

Signed: James H Reese

James H. Reese, Plant Manager

Name and Title (Please Type)

Date: 8/1/90 Telephone No. (904) 366-3343

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 ~~examined~~ 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

See Florida Administrative Code Rule 17-2.100(57) and (104)

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 Stephen L. Alexander

Stephen L. Alexander
Name (Please Type)

Missimer & Associates, Inc.
Company Name (Please Type)

8130 Baymeadows Way West #104, Jax, FL 32256
Mailing Address (Please Type)

Florida Registration No. 38519 Date: 8/2/90 Telephone No. (904) 448-6400

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.

Refer to Process Description (Attachment 2) and the Flow Diagram
(Attachments 7A, 7B, and 7C)

B. Schedule of project covered in this application (Construction Permit Application Only)
Start of Construction July 1990 Completion of Construction September 1990

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.)

D2-Baghouse	\$9,640	D4-Cyclone	\$17,500	D8-Baghouse	\$6,000
D3-Afterburner	\$258,000	D5-Baghouse	\$5,000	Cyclones 4x1	\$7,000
Venturi Scrubber	\$50,000	D6-Baghouse	\$6,000	D9-Cyclone	\$1,750
Filter	\$8,000	D7-Cyclones 5x1	\$8,750		
					Total = \$377,640.00

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

Permit/Certification Number: A016-157749

Date of issue: February 9, 1989

Expiration Date: December 31, 1993



E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 50;
if power plant, hrs/yr n/a; if seasonal, describe: _____
n/a

F. 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? yes
 - a. If yes, has "offset" been applied? no*
 - b. If yes, has "Lowest Achievable Emission Rate" been applied? no
 - c. If yes, list non-attainment pollutants. ozone, particulates
 2. Does best available control technology (BACT) apply to this source?
If yes, see Section VI. no
 3. Does the State "Prevention of Significant Deterioration" (PSD)
requirement apply to this source? If yes, see Sections VI and VII. no
 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
- H. Do "Reasonably Available Control Technology" (RACT) requirements apply
to this source? yes**
- a. If yes, for what pollutants? ozone and particulate matter
 - b. If yes, in addition to the information required in this form,
any information requested in Rule 17-2.650 must be submitted.

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

*Offset is not required because the net increase in emissions is not sufficient to expose this application to a New Source Review.

**Most sources of particulate emissions documented in this application are exempt from RACT requirements according to Rule 17-2.650(2)(b)3. Those sources emit less than one ton of particulates per year. The exceptions are sources D3 and D4 which are treated as RACT SOURCES.

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

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

REFER TO ATTACHMENT 3A

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

B. Process Rate, if applicable: (See Section V, Item 1) REFER TO ATTACHMENT 3B

1. Total Process Input Rate (lbs/hr): _____
2. Product Weight (lbs/hr): _____

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

REFER TO ATTACHMENT 4A

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2 ⁴	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

¹See Section V, item 2.

²Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

³Calculated from operating rate and applicable standard.

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

J. Control Devices: (See Section V, Item 4) REFER TO ATTACHMENT 4B

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels REFER TO ATTACHMENT 5

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	0.0304 MMCF	0.0304 MMCF	31.7

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: n/a Percent Ash: n/a
 Density: n/a lbs/gal Typical Percent Nitrogen: Not available
 Heat Capacity: n/a BTU/lb n/a BTU/gal
 Other Fuel Contaminants (which may cause air pollution): n/a

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average n/a Maximum

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

Chaff from the Cyclone and Baghouse above the stoner drops into a drum.
Chaff from the Cyclones ahead of the Afterburner is drummed
for disposal at a landfill. Filter cake from scrubber liquor filter is
drummed for disposal. Purge stream from filter is sewered (approximately 3 GPM)

REFER TO ATTACHMENT 6

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

Stack Height: _____ ft. Stack Diameter: _____ ft.
 Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.
 Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION - n/a

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.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

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

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr.

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.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
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, design pressure drop, 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 8 1/2" 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 8 1/2" 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 8 1/2" 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. The appropriate application fee in accordance with Rule 17-4.05. 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 n/a

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: |

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

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:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

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:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

¹Explain method of determining efficiency.

²Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:²

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:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:¹

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:²

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:¹

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:²

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

Explain method of determining efficiency.

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

(5) Environmental Manager: _____

(6) Telephone No.: _____

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:¹

Contaminant

Rate or Concentration

(8) Process Rate:¹

10. Reason for selection and description of systems:

¹Applicant 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 _____ () SO₂+ _____ 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.

Specify bubbler (B) or continuous (C).

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 of 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.

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.



GENERAL FOODS WORLDWIDE
COFFEE & INTERNATIONAL

Charles A. Adamo Vice President/Group Executive-Operations

NOTE: Original mailed to
Steve Smallwood on
September 19, 1988

September 1, 1988

Mr. Steven Smallwood, Bureau Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Subject: Letter of Authorization
Maxwell House Coffee Company

Dear Mr. Smallwood:

This is to advise your office that Jim Reese, Plant Manager, Maxwell House Coffee Company, Jacksonville, Florida, is designated to sign as authorized representative for air permit applications and reports for the Jacksonville facility.

Very truly yours,

Charles A. Adamo

ATTACHMENT 2

SECTION IIA PROCESS DESCRIPTION CONTINUOUS ROASTING PROCESS MAXWELL HOUSE COFFEE COMPANY JACKSONVILLE, FLORIDA

Green coffee beans are airveyed from existing bunkers, shared with the Regular and Soluble Coffee Roasting Processes, to the surge bins and scale as shown on the Flow Diagram (Attachment 7A, 7B, and 7C, "Process Flow Diagram"). A process cyclone separates the green coffee beans from the air stream. The particulates in the air stream are removed by a baghouse (EMISSION POINT NO. D2). After weighing, the coffee beans are fed into the continuous roaster. Off-gases and chaff are drawn off through process cyclones, processed through a venturi scrubber to remove particulates, and then incinerated in a thermal afterburner to control opacity and particulate emissions (EMISSION POINT D3). The solids from the process cyclones are airveyed to a pelletizer or drummed. Purged scrubber liquor is filtered prior to going to the sewer. A cyclone is used to remove particulates from the vented cooling section of the roaster (EMISSION POINT NO. D4).

The roaster is followed by destoners. The roasted and cooled coffee beans are airveyed to the surge bins and scale for product weighing. A process cyclone separates the roasted beans from the air stream. The particulates in this air stream are also removed by a baghouse (EMISSION POINT NO. D5). An air stream, vented from the stoners, is controlled with a cyclone and a baghouse (EMISSION POINT NO. D6).

After weighing, the roasted coffee is airveyed to one of five existing bunkers. Four bunkers are equipped with a cyclone and one is equipped with a baghouse (EMISSION POINT NO. D7) to

release air from the airveyors. Only one cyclone or baghouse will be operating at any given time, depending upon which bunker is being filled. Similarly, the three airveyors to the existing BAR system are each equipped with a cyclone. Only one of these airveyors will operate at a time. The BAR airveyor cyclones, a chaff pelletizer cyclone and six BAR cyclones from Regular Coffee Roasting (Permit A016-1075102) are filtered by a common baghouse (EMISSION POINT NO. D8).

During start up and process upsets, offspec beans from the roaster are diverted to a reject bin. These beans are then airveyed to a green bean silo. A cyclone is used to release air from the airveyor (NEW EMISSION POINT D9) and to remove particulates from the airstream.

ATTACHMENT 3A

A. RAW MATERIALS AND CHEMICALS USED IN YOUR PROCESS, IF APPLICABLE:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Green Coffee	N/A	N/A	12,000	Attachment 7A

ATTACHMENT 3B

B. PROCESS RATE, IF APPLICABLE:

1. Total Process Input Rate (lbs/hr): 12,000
2. Product Weight (lbs/hr): 10,500 (Moisture difference)

12.5% ?

ATTACHMENT 4A

C. AIRBORNE CONTAMINANTS EMITTED

Name of Contaminant	Emission ¹		Allowed ² Emission Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulates	.01 0.238	0.042	RACT Exempt	0.238	1,999	0.99	D2
Particulates	.59 2.57	2.48	0.03 gr/DSCF	2.57	21,588	10.79	D3
Particulates	2.83 2.83	1.05	0.03 gr/DSCF	2.83	23,772	11.89	D4
Particulates	.003 0.238	0.0126	RACT Exempt	0.238	1,999	0.99	D5
Particulates	0.11 0.238	0.462	RACT Exempt	0.238	1,999	0.99	D6
Particulates	.05 0.238	0.21	RACT Exempt	0.238	1,999	0.99	D7
Particulates	.04 0.238	0.168	RACT Exempt	0.238	1,999	0.99	D8
Particulates	.005 0.238	0.021	RACT Exempt	0.238	1,999	0.99	D9

Asks for increase
in Coffee Room
Source # 3 to 11.89 T/yr
New
+ Source # 8 to 99 T/yr
Also asks actual
196. cf. 21

ATTACHMENT 4B

D. CONTROL DEVICES

Name and Type (Model & Serial No.)	Contaminant	Efficiency (Estimated)	Range of Particles Size Collected (in microns) (if applicable)	Basis for Efficiency (Section V Item 5)
D2 Baghouse	Particulates	98%	>20	Industrial Standards
D3 Ross-Waldron 10,000 SCFM Afterburner	Particulates	80%	NA	Estimate
D4 Cyclone	Particulates	90%	>40	Industrial Standards
D5 Baghouse	Particulates	98%	>20	Industrial Standards
D6 Baghouse	Particulates	98%	>40	Industrial Standards
D7 Cyclones	Particulates	98%	>20	Industrial Standards
D8 Baghouse	Particulates	99%	>40	Industrial Standards
D9 Cyclone	Particulates	90%	>40	Industrial Standards

ATTACHMENT 4

SECTION III, C

CALCULATIONS OF EMISSIONS FOR
CONTINUOUS ROASTING PROCESS

MAXWELL HOUSE DIVISION - GENERAL FOODS CORPORATION
JACKSONVILLE, FLORIDA

EMISSION POINT NO. D2 - GREEN BEAN AIRVEYOR BAGHOUSE

EMISSIONS

REF. McKee Environmental Test (Point 1) dated 02/26 - 03/05/90,
actual emissions equal 0.01 lb/hr (TAB 10)

$$0.01 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{0.042 \text{ TPY}}$$

ALLOWABLE EMISSIONS

According to the test results for a similar source, this emission point qualifies for a RACT Exemption. Emissions will be less than 0.238 LBS/HR and 0.99 TONS/YR

POTENTIAL EMISSIONS *

$$\text{Hourly Emission Rate} = 0.238 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = 1,999 \text{ LBS/YR}$$

$$\text{Annual Emission Rate} = 1,999 \text{ LBS/YR} \times 1/2000 = 0.99 \text{ TONS/YR}$$

* According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

EMISSION POINT D3 - CONTINUOUS ROASTER AFTERBURNER

EMISSION

REF. McKee Environmental Test (Point 2) dated 02/26 - 03/05/90,
actual emissions equal 0.59 lb/hr (TAB 10)

$$0.59 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{2.48 \text{ TPY}}$$

ALLOWABLE EMISSION

The allowable emissions rate is limited by the RACT Rule, FAC 17-2.650(2)(c)12.b to not more than 0.03 gr/DSCF.

Afterburner Design Flow Rate = 10,000 SCFM
(Page 2 of Ross-Waldron's Data, Refer to TAB 11)

Allowable Emissions Rate
= 10,000 SCFM x 60 MIN/HR x 0.03 gr/DSCF x 1/7000 gr/LB
= 2.57 LBS/HR

$$2.57 \text{ LBS/HR} \times 8400 \text{ HRS/YR} \times \frac{1}{2000} \text{ LBS/TON} = 10.79 \text{ TONS/YR}$$

POTENTIAL EMISSIONS *

$$\text{Hourly Emission Rate} = 2.57 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = 21,588 \text{ LBS/YR}$$

$$\text{Annual Emission Rate} = 21,588 \text{ LBS/YR} \times 1/2000 = 10.79 \text{ TONS/YR}$$

* According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

EMISSION POINT NO. D4 - COOLER CYCLONE

EMISSIONS

REF. McKee Environmental Test (Point 3) dated 02/26 - 03/05/90,
actual emissions equal 0.25 lb/hr (TAB 10)

$$0.25 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{1.05 \text{ TPY}}$$

ALLOWABLE EMISSIONS

The allowable emissions rate is limited by the RACT Rule, FAC 17-2.650(2)(c)12.b to not more than 0.03 gr/DSCF.

$$\begin{aligned} &= 11,000 \text{ DSCFM} \times 0.03 \text{ gr/DSCF} \times 60 \text{ min/hr} \times 1/7000 \text{ gr/LB} \\ &= \underline{2.83 \text{ LBS/HR}} \end{aligned}$$

$$2.83 \text{ LBS/HR} \times 8400 \text{ HRS/YR} \times \frac{1}{2000} \text{ LBS/TON} = \underline{11.89 \text{ TONS/YR}}$$

POTENTIAL EMISSIONS *

$$\text{Hourly Emission Rate} = 2.83 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = \underline{23,772 \text{ LBS/YR}}$$

$$\text{Annual Emission Rate} = 23,772 \text{ LBS/YR} \times 1/2000 = \underline{11.89 \text{ TONS/YR}}$$

* According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

EMISSION POINT NO. D5 - AIRVEYOR TO WEIGHT STATION BAGHOUSE

EMISSIONS

REF. McKee Environmental Test (Point 4) dated 02/26 - 03/05/90,
actual emissions equal 0.003 lb/hr (TAB 10)

$$0.003 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{0.0126 \text{ TPY}}$$

ALLOWABLE EMISSIONS

According to the test results for a similar source, this emission point qualifies for a RACT Exemption. Emissions will be less than **0.238 LBS/HR** and **0.99 TONS/YR**

POTENTIAL EMISSIONS *

$$\text{Hourly Emission Rate} = 0.238 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = \mathbf{1,999 \text{ LBS/YR}}$$

$$\text{Annual Emission Rate} = 1,999 \text{ LBS/YR} \times 1/2000 = \mathbf{0.99 \text{ TONS/YR}}$$

* According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

EMISSION POINT NO. D6 - STONER BAGHOUSE

EMISSIONS

REF. McKee Environmental Test (Point 5) dated 02/26 - 03/05/90,
actual emissions equal 0.11 lb/hr (TAB 10)

$$0.11 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{0.462 \text{ TPY}}$$

ALLOWABLE EMISSIONS

According to the test results for a similar source, this emission point qualifies for a RACT Exemption. Emissions will be less than **0.238 LBS/HR** and **0.99 TONS/YR**

POTENTIAL EMISSIONS

*

$$\text{Hourly Emission Rate} = 0.238 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = \mathbf{1,999 \text{ LBS/YR}}$$

$$\text{Annual Emission Rate} = 1,999 \text{ LBS/YR} \times 1/2000 = \mathbf{0.99 \text{ TONS/YR}}$$

* According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

EMISSION POINT NO. D7 - PRODUCT STORAGE BUNKER CYCLONE

EMISSIONS

REF. McKee Environmental Test (Point 6) dated 02/26 - 03/05/90,
actual emissions equal 0.05 lb/hr (TAB 10)

$$0.05 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{0.21 \text{ TPY}}$$

ALLOWABLE EMISSIONS

According to the test results for a similar source, this emission point qualifies for a RACT Exemption. Emissions will be less than **0.238 LBS/HR** and **0.99 TONS/YR**

POTENTIAL EMISSIONS *

$$\text{Hourly Emission Rate} = 0.238 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = \mathbf{1,999 \text{ LBS/YR}}$$

$$\text{Annual Emission Rate} = 1,999 \text{ LBS/YR} \times 1/2000 = \mathbf{0.99 \text{ TONS/YR}}$$

* According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

EMISSION POINT NO. D8 - BAGHOUSE FOR BAR CYCLONE AND PELLETIZER
CYCLONE

EMISSIONS

REF. McKee Environmental Test (Point 7) dated 02/26 - 03/05/90,
actual emissions equal 0.04 lb/hr (TAB 10)

$$0.04 \text{ lb/hr} \times 8400 \text{ hr/yr} \times \frac{1}{2000} \text{ lbs/ton} = \underline{0.168 \text{ TPY}}$$

ALLOWABLE EMISSIONS

According to the test results for a similar source, this emission
point qualifies for a RACT Exemption. Emissions will be less
than **0.238 LBS/HR** and **0.99 TONS/YR**

POTENTIAL EMISSIONS *

$$\text{Hourly Emission Rate} = 0.238 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = \mathbf{1,999 \text{ LBS/YR}}$$

$$\text{Annual Emission Rate} = 1,999 \text{ LBS/YR} \times 1/2000 = \mathbf{0.99 \text{ TONS/YR}}$$

* According to 17-2.100(156), the revised definition of
potential emissions refers to emissions after the control
device.

NEW EMISSION POINT NO. D9 - OFFSPEC ROASTED BEAN AIRVEYOR TO GREEN BEAN SILO # 1

EMISSIONS

REF. McKee Environmental Test (Point 6, Attachment II) dated 02/26 - 03/05/90. The new source will have similar characteristics to Source D7. Estimated actual emissions are thus equal to 0.05 lb/hr

$$\overset{.05}{0.05} \text{ LBS/HR} \times 8400 \text{ HRS/YR} \times \frac{1}{2000} \text{ LBS/TON} = \overset{.21}{0.021} \text{ TONS/YR}$$

ALLOWABLE EMISSIONS

According to the test results for a similar source, this emission point qualifies for a RACT Exemption. Emissions will be less than 0.238 LBS/HR and 0.99 TONS/YR

POTENTIAL EMISSIONS **

$$\text{Hourly Emission Rate} = 0.238 \text{ LBS/HR} \times 8400 \text{ HRS/YR} = 1,999 \text{ LBS/YR}$$

$$\text{Annual Emission Rate} = 1,999 \text{ LBS/YR} \times 1/2000 = 0.99 \text{ TONS/YR}$$

** According to 17-2.100(156), the revised definition of potential emissions refers to emissions after the control device.

ATTACHMENT 5

SECTION III.E: FUELS

CALCULATION OF FUEL CONSUMPTION
AND
HEAT INPUT RATE

MAXWELL HOUSE COFFEE COMPANY

JACKSONVILLE, FLORIDA

NATURAL GAS

Afterburner Manufacturer's Design Data

Gross Fuel Energy Required = 31,654,000 Btu/hr
= 31.7 MMBtu/hr

Note: Heat release from contaminants will be negligible in the scrubber gases.

Detailed Fuel Calculation

Calculate the consumption rate of natural gas

$$\frac{31,654,000 \text{ Btu/hr}}{1,040 \text{ Btu/SCF Natural Gas}} = 30,436.5 \text{ CF/hr Natural Gas}$$

$$\frac{30,436.5 \text{ SCF}}{1,000,000} = 0.0304 \text{ MMCF/hr Natural Gas}$$

ATTACHMENT 6

SECTION III.H: EMISSION STACK GEOMETRY AND FLOW CHARACTERISTICS

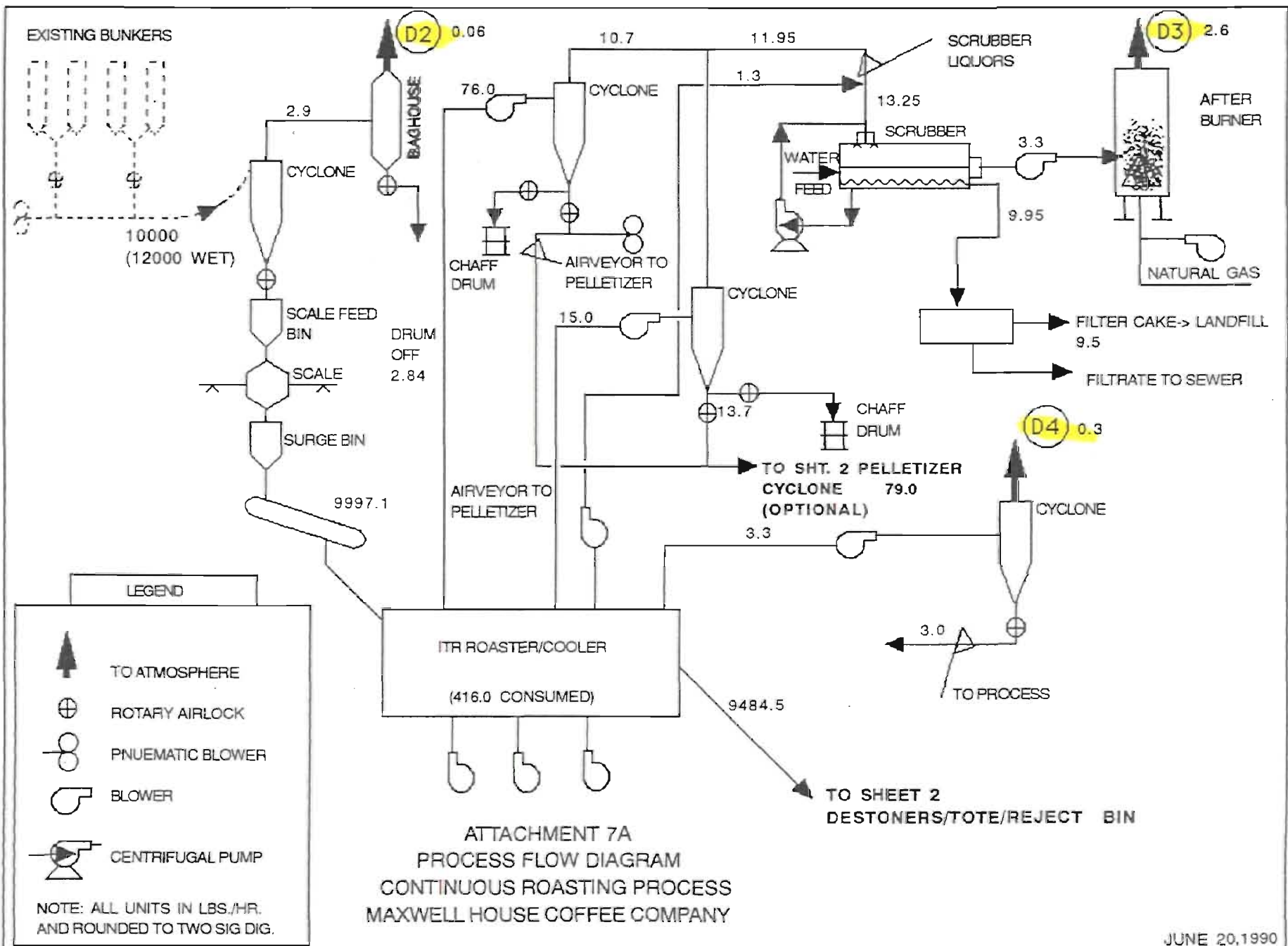
MAXWELL HOUSE COFFEE COMPANY

JACKSONVILLE, FLORIDA

III. H. EMISSION STACK GEOMETRY AND FLOW CHARACTERISTICS:

<u>SOURCE</u>	<u>STACK HEIGHT (FT)</u>	<u>STACK DIAMETER</u>	<u>FLOW (ACFM)</u>	<u>FLOW (DSCFM)</u>	<u>EXIT TEMP. (°F)</u>
D2	93' 8.25"	8"	400	390	87.5°
D3	118' 0.75"	89.6"	28,000	10,000	800°
D4	99' 0.25"	24" x 24"	12,000	11,000	100°
D5	88' 1.75"	4.5"	220	205	100°
D6	86' 11.25"	21"	10,300	9,400	100°
D7	97' 7.25"	8"	270	250	110°
D8	84' 10.875"	15"	3,900	3,700	80°
D9	77' 55"	6"	300	250	100°

Note: Stack geometry and flow characteristics are based upon the most recent compliance testing results.



FROM SHT. 1
ITR ROASTER / COOLER
9485.5

D6

0.04

BAGHOUSE

9385.5

9.0

CHAFF TO
DRUM
8.96

TOTE

100

TOTE DUMP
STATION

REJECT BIN

ITR
ROASTER /COOLER
DESTONING

9376.5
TO SHT. 3
REWORK
BUNKERS

ATTACHMENT 7B
PROCESS FLOW DIAGRAM
CONTINUOUS ROASTING PROCESS
MAXWELL HOUSE COFFEE COMPANY

D9

0.01

100

99.99

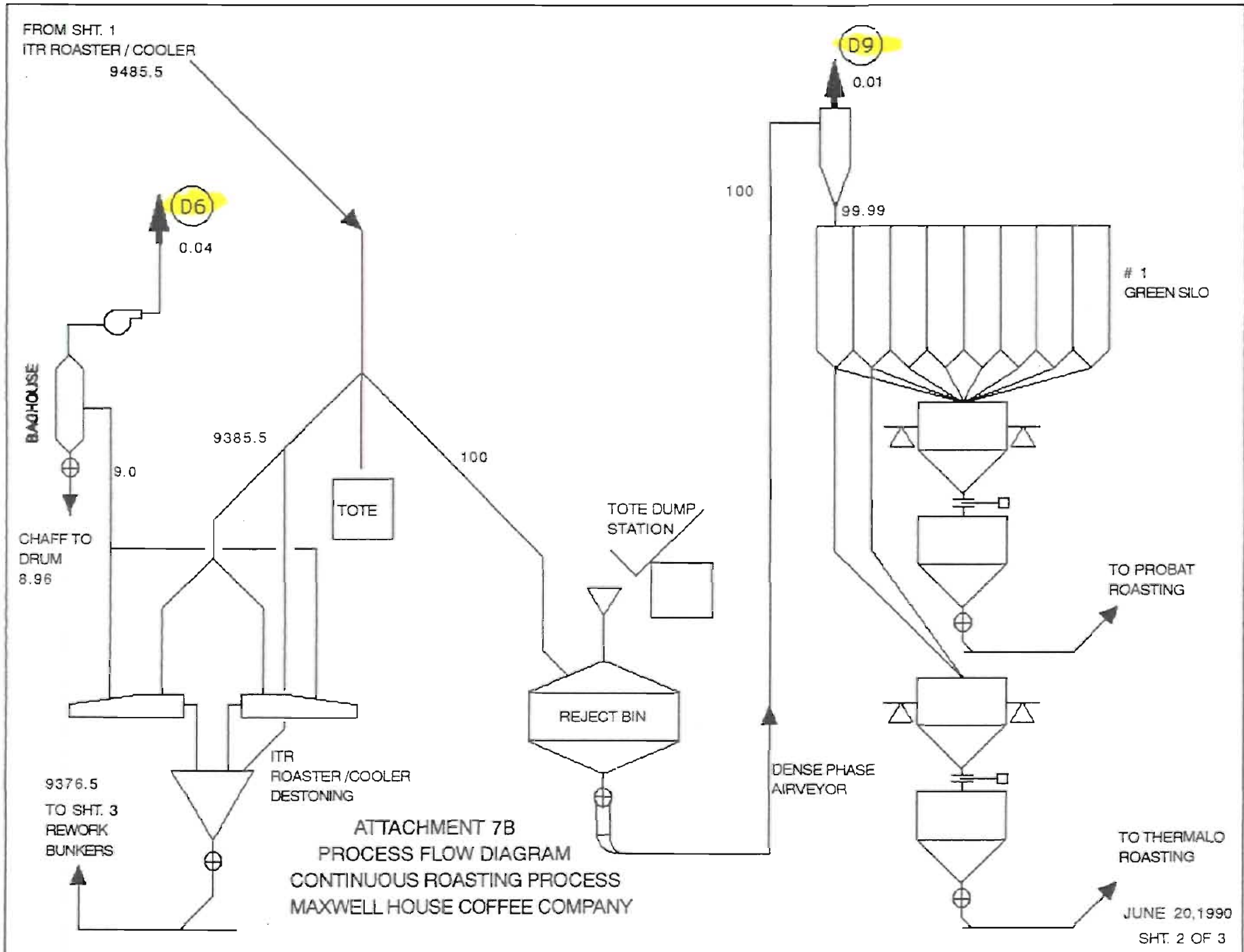
1
GREEN SILO

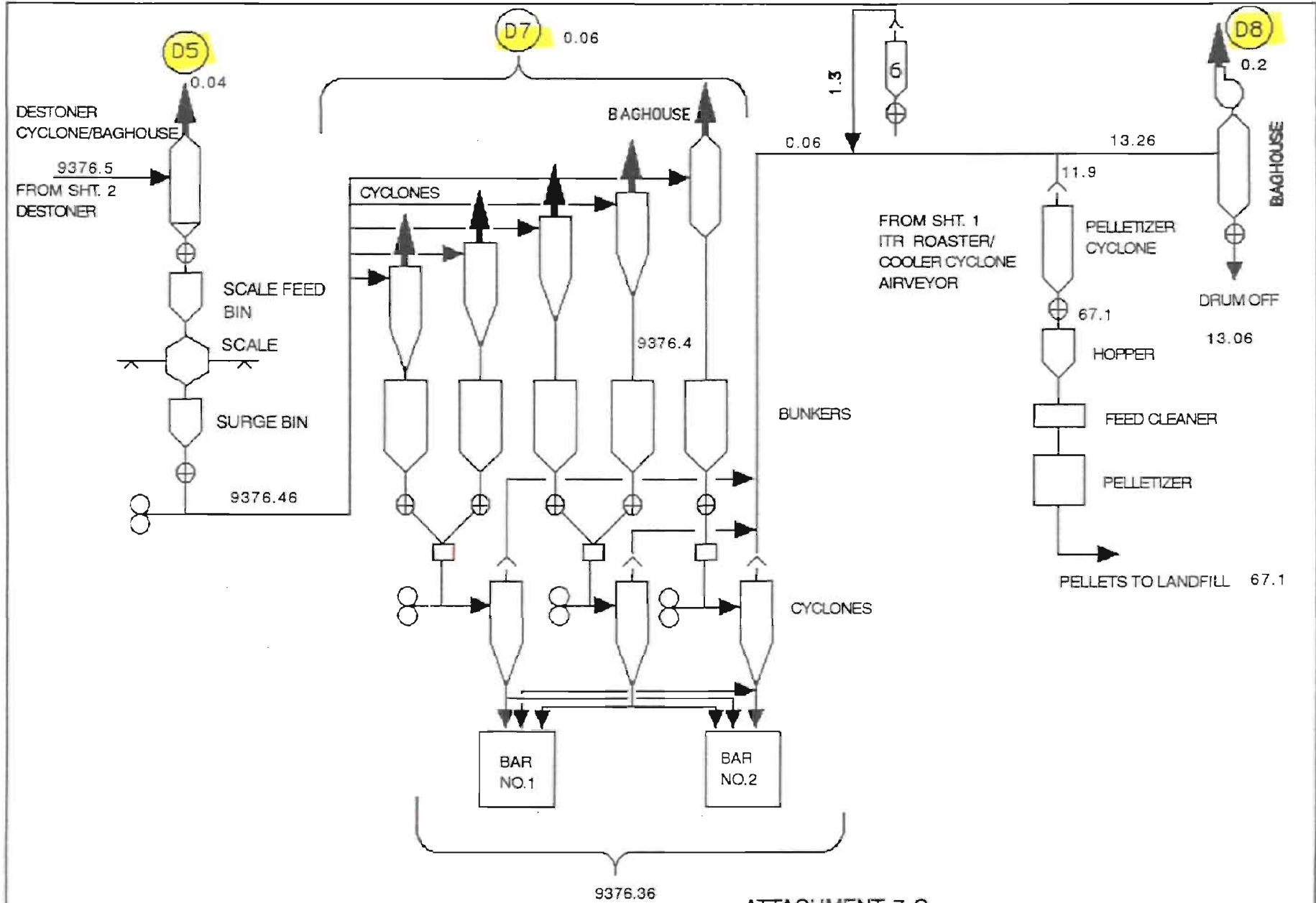
TO PROBAT
ROASTING

DENSE PHASE
AIRVEYOR

TO THERMALO
ROASTING

JUNE 20, 1990
SHT. 2 OF 3





ATTACHMENT 7 C
 PROCESS FLOW DIAGRAM
 CONTINUOUS ROASTING PROCESS
 MAXWELL HOUSE COFFEE COMPANY

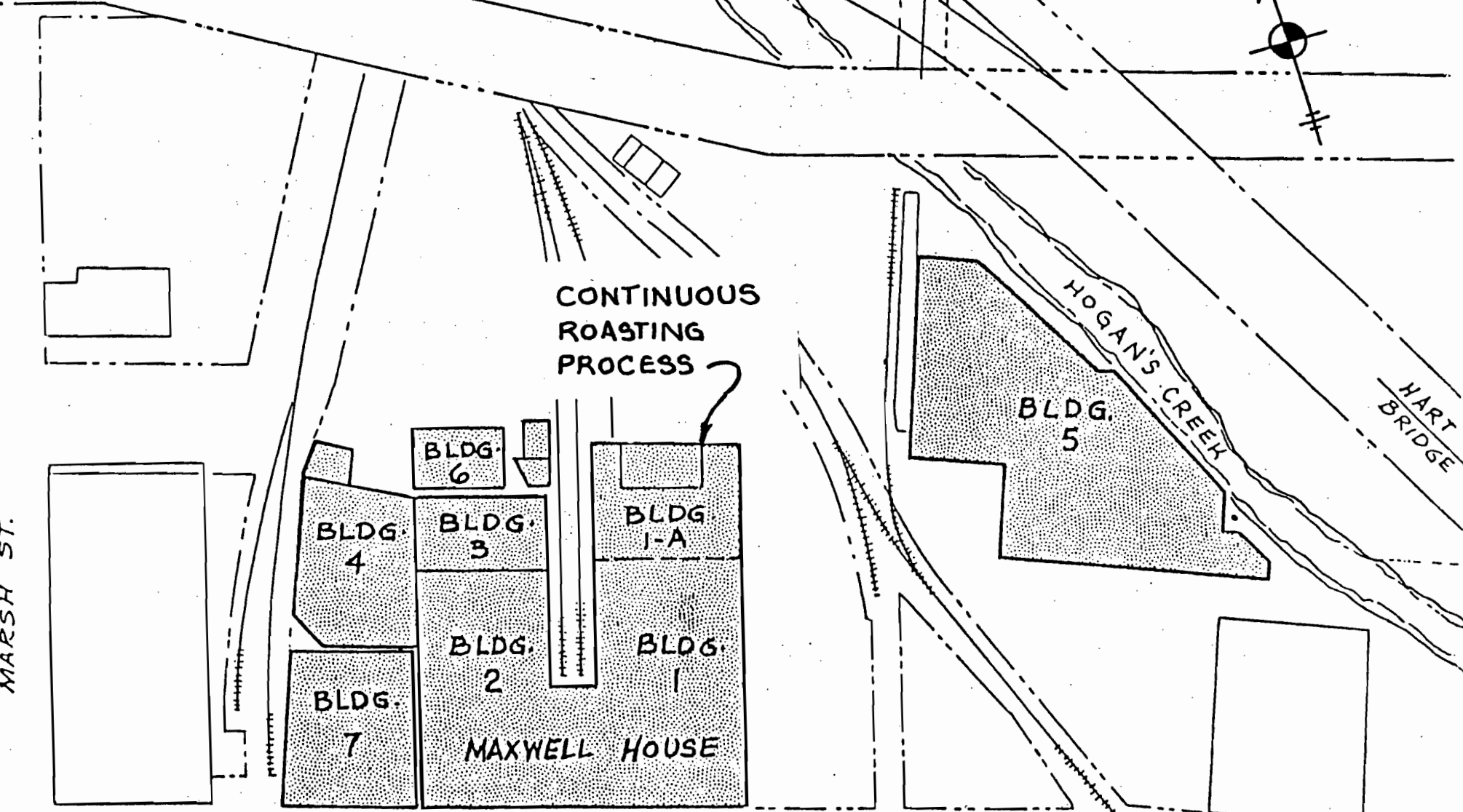


BEST AVAILABLE COPY

NORTH

MARSH ST.

CONTINUOUS
ROASTING
PROCESS



E. BAY STREET

PLOT PLAN

TABLE I. EMISSION SUMMARY

DATE	POINT No.	SOURCE	EMISSION LBS/HR	ALLOWABLE LBS/HR
2/26/90	2	Roaster Afterburner	0.59 *	2.57
2/26/90	3	Cooler Exhaust	0.25	2.57
2/27/90	7	BAR System	0.04	0.238
2/28/90	1	Green Bean Feed	0.01	0.238
3/1/90	5	Stoner Pollutant	0.11	0.238
3/1/90	4	Stoner Product	0.003	0.238
3/2/90	6	Product Bunker	0.05	0.238

GENERAL FOODS CORPORATION

PERMIT NUMBER: A016-157749

3/5/90 Roaster Afterburner. Point No. 2 tested at a lower temperature = 0.73 lbs/ hr emission **

* 1000°F

** 800°F

ATTACHMENT # 10

SOURCE TEST REPORT
MAXWELL HOUSE DIVISION
ITR SYSTEM
PARTICULATE EMISSIONS
2/26/90-3/5/90

PREPARED BY:
McKEE ENVIRONMENTAL SERVICES
15477 SEARS ROAD
JACKSONVILLE, FLORIDA 32218
(904) 764-7405

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I. INTRODUCTION

Compliance testing for particulate emissions was performed at the Maxwell House Division plant in Jacksonville, Florida on 2/26/90-3/5/90. The ITR Roaster emission control system was tested utilizing EPA Method 5 sampling and analytical procedures.

Visible emission tests were also performed on these sources in conjunction with the particulate tests and are included in Appendix A.

II. SUMMARY OF RESULTS

Results of the testing are summarized in the following tables. Complete emission data along with supportive field test sheets are found in Appendices A and B.

TABLE I. EMISSION SUMMARY

DATE	POINT No.	SOURCE	EMISSION LBS/HR	ALLOWABLE LBS/HR
2/26/90	2	Roaster Afterburner	0.59	2.57
2/26/90	3	Cooler Exhaust	0.25	2.57
2/27/90	7	BAR System	0.04	0.238
2/28/90	1	Green Bean Feed	0.01	0.238
3/1/90	5	Stoner Pollutant	0.11	0.238
3/1/90	4	Stoner Product	0.003	0.238
3/2/90	6	Product Bunker	0.05	0.238

GENERAL FOODS CORPORATION

PERMIT NUMBER: AC - 16-121136

3

3/5/90 Roaster Afterburner. Point No. 2 tested at a lower temperature = 0.73 lbs/ hr emission

III. PROCESS DESCRIPTION AND OPERATION

ROASTER EMISSION CONTROL SYSTEM (ITR)

Exhaust streams from the roaster and quench/cooling zones are discharged through three separate collection systems. The streams contain mixtures of chaff, smoke, ash, oils and water vapor.

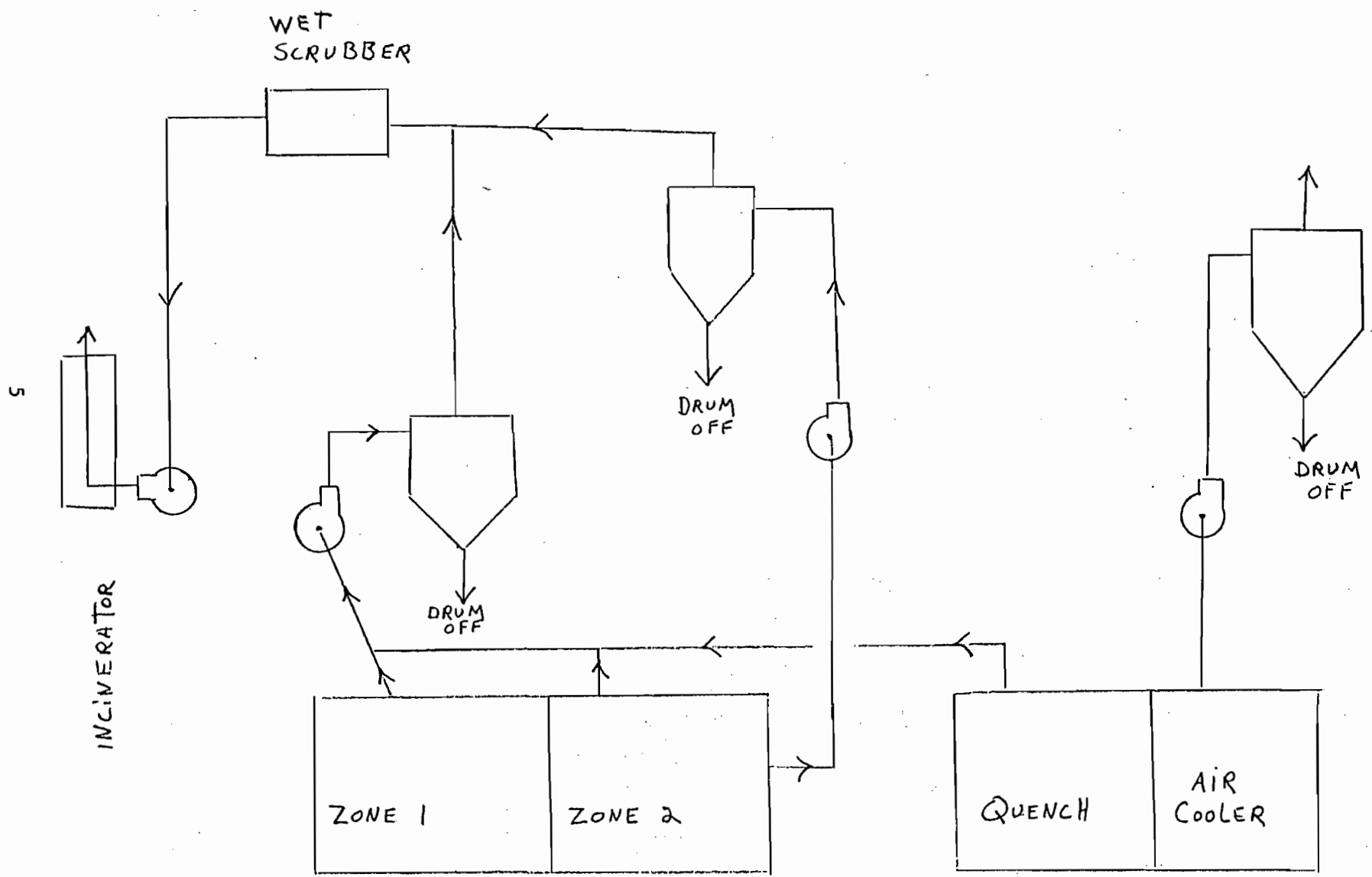
The roaster exhaust system handles air stream from the two heating zones and the quench zone. These three streams pass through the roaster exhaust blower and into the roaster exhaust cyclone for large particle removal. The exhaust from this unit is then passed through a wet scrubber where a water spray is used to remove smaller particles. The exhaust from the wet scrubber is then sent to the Thermal Afterburner where incineration is used to burn remaining particulates.

The Roaster Chaff Exhaust System handles chaff taken from the discharge of zone #2 and passes it through the Chaff Exhaust Blower into the Chaff Exhaust Cyclone for large particle removal. Its exhaust is also sent through the wet scrubber and afterburner for further separation and incineration.

The air stream from the cooling zone is passed through the Cooler Exhaust Cyclone; however, the exhaust is vented to the atmosphere (particulate emission at this point is estimated to be very low and therefore no need to pass through the wet scrubber or the afterburner).

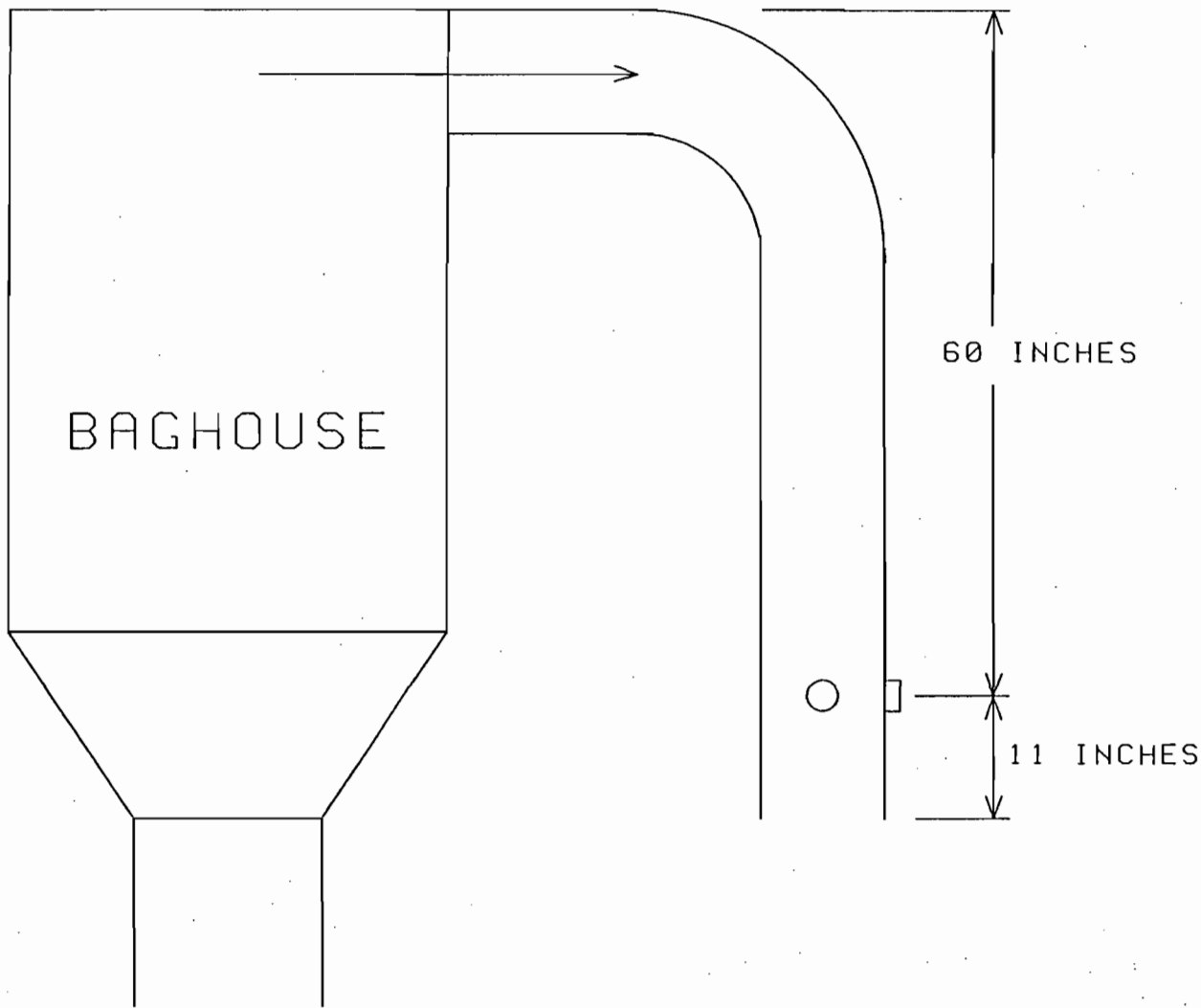
The solids discharged from the cyclones are collected in drums and/or carts.

ROASTER EMISSION CONTROL SYSTEM (ITR)



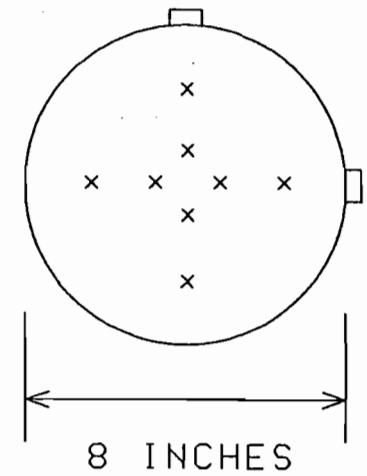
IV. SAMPLING POINT LOCATION

Sampling point location and outlet duct schematic are given in Figures 1-7.

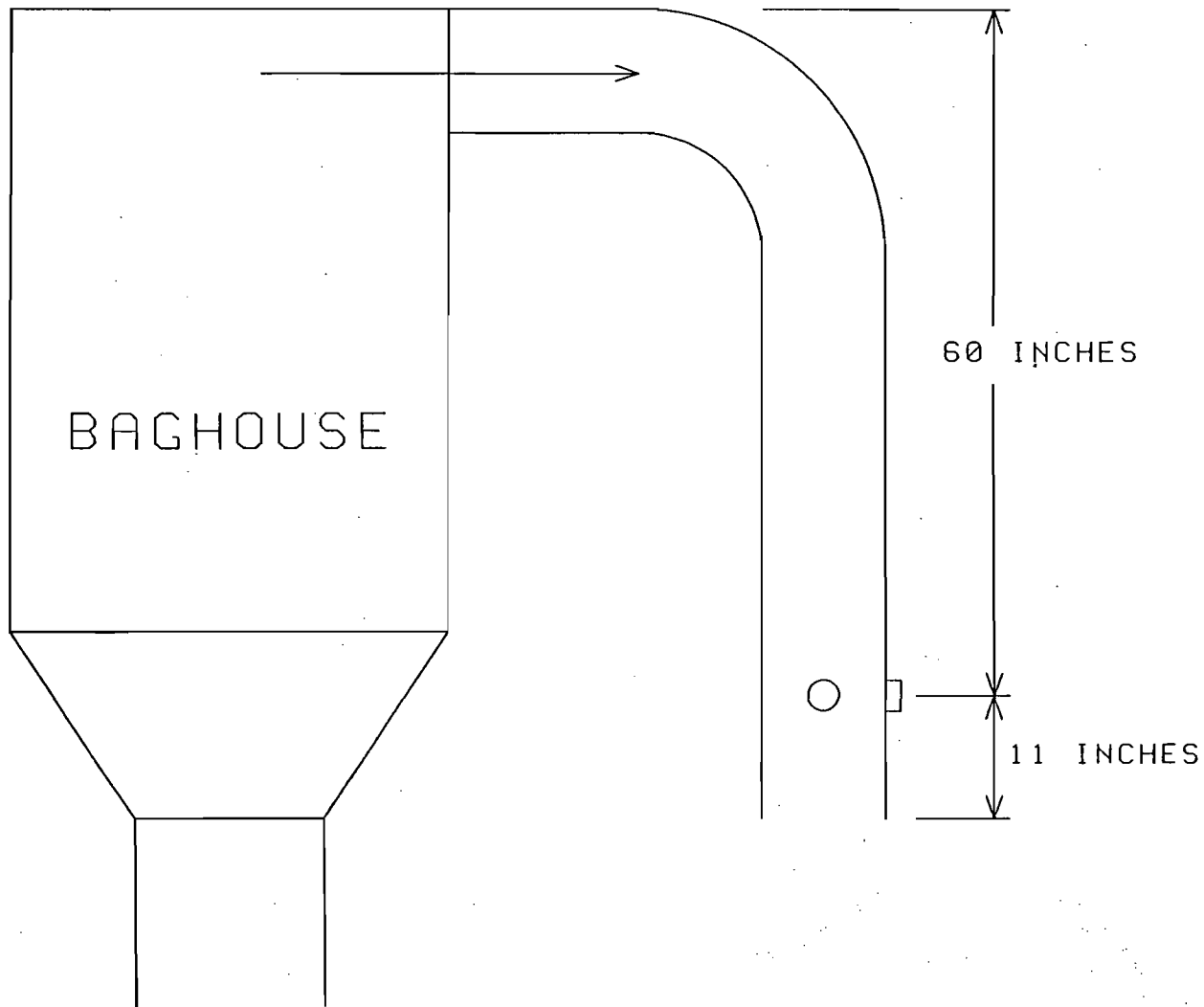


POINT NO.	INCHES INSIDE STACK WALL
1	1.6
2	3.2
3	4.8
4	6.4

(2 TRAVERSES)

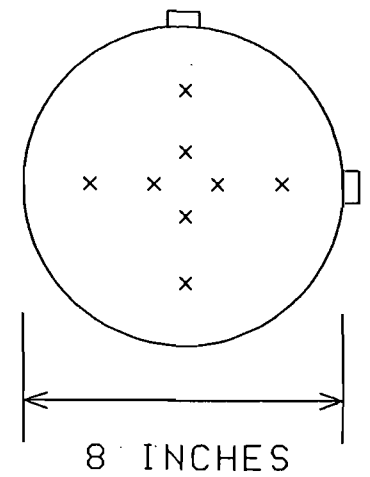


GREEN BEAN FEED SYSTEM, POINT NO. 1

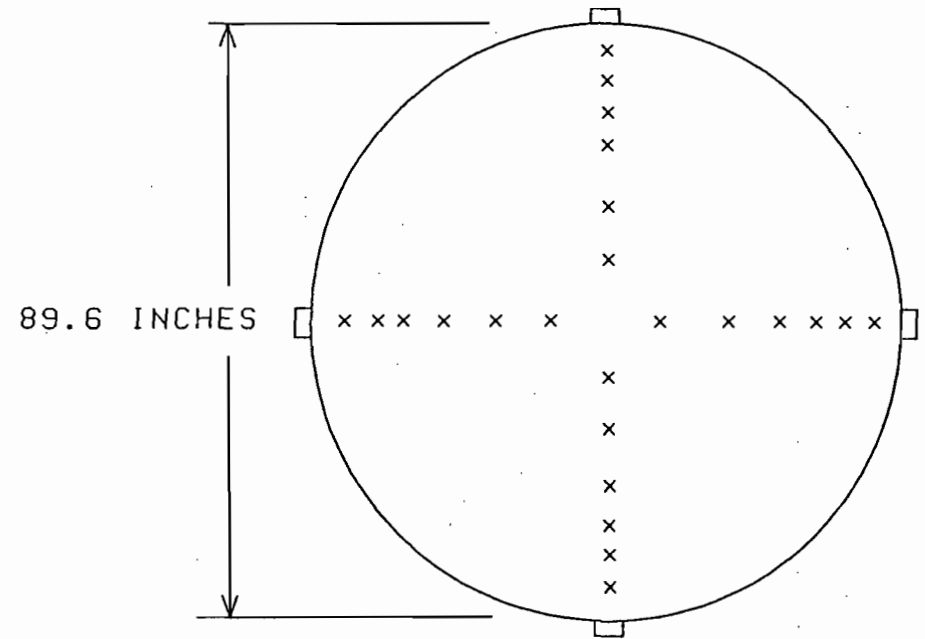
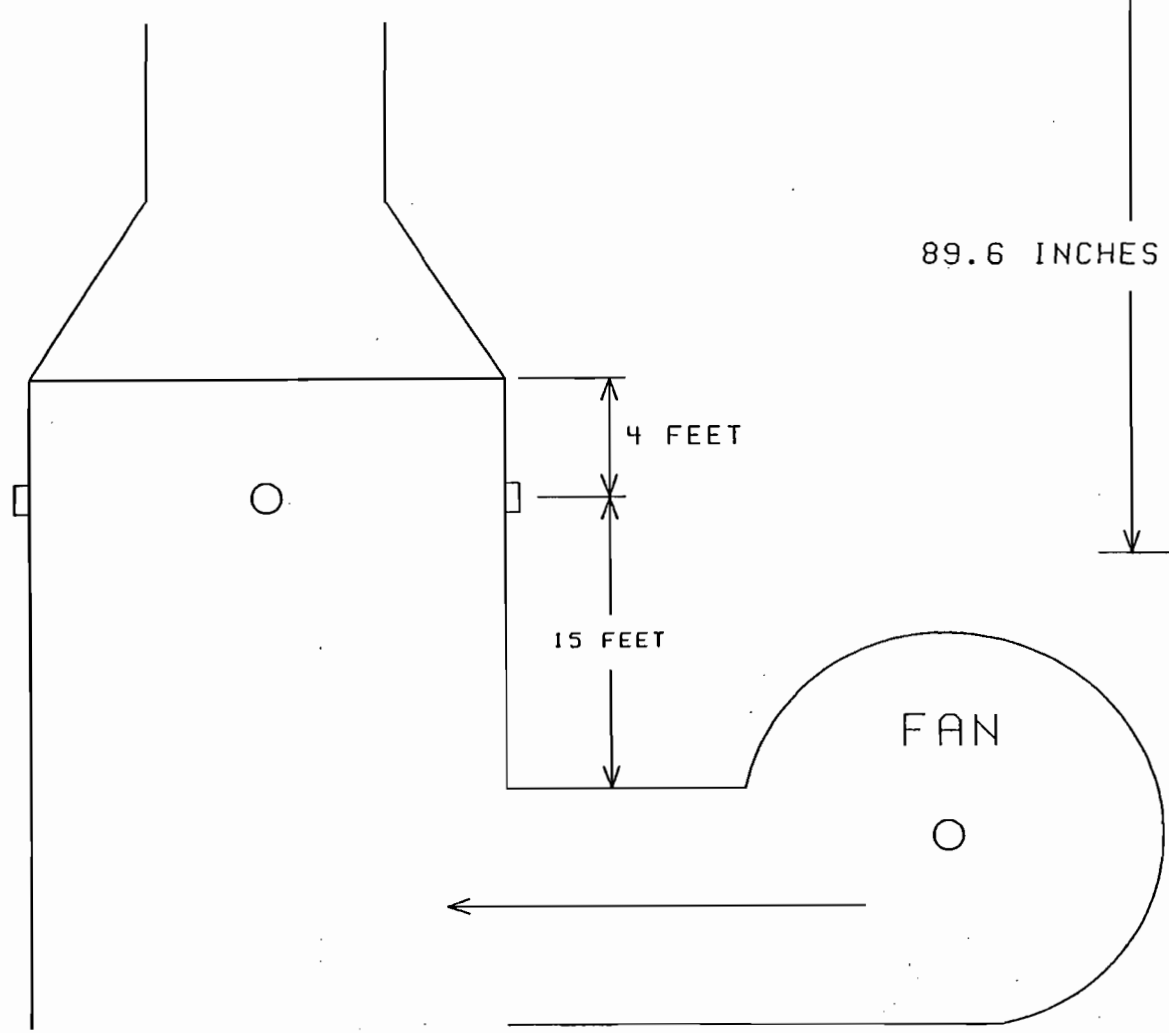


POINT NO.	INCHES INSIDE STACK WALL
1	1.6
2	3.2
3	4.8
4	6.4

(2 TRAVERSES)



GREEN BEAN FEED SYSTEM, POINT NO. 1



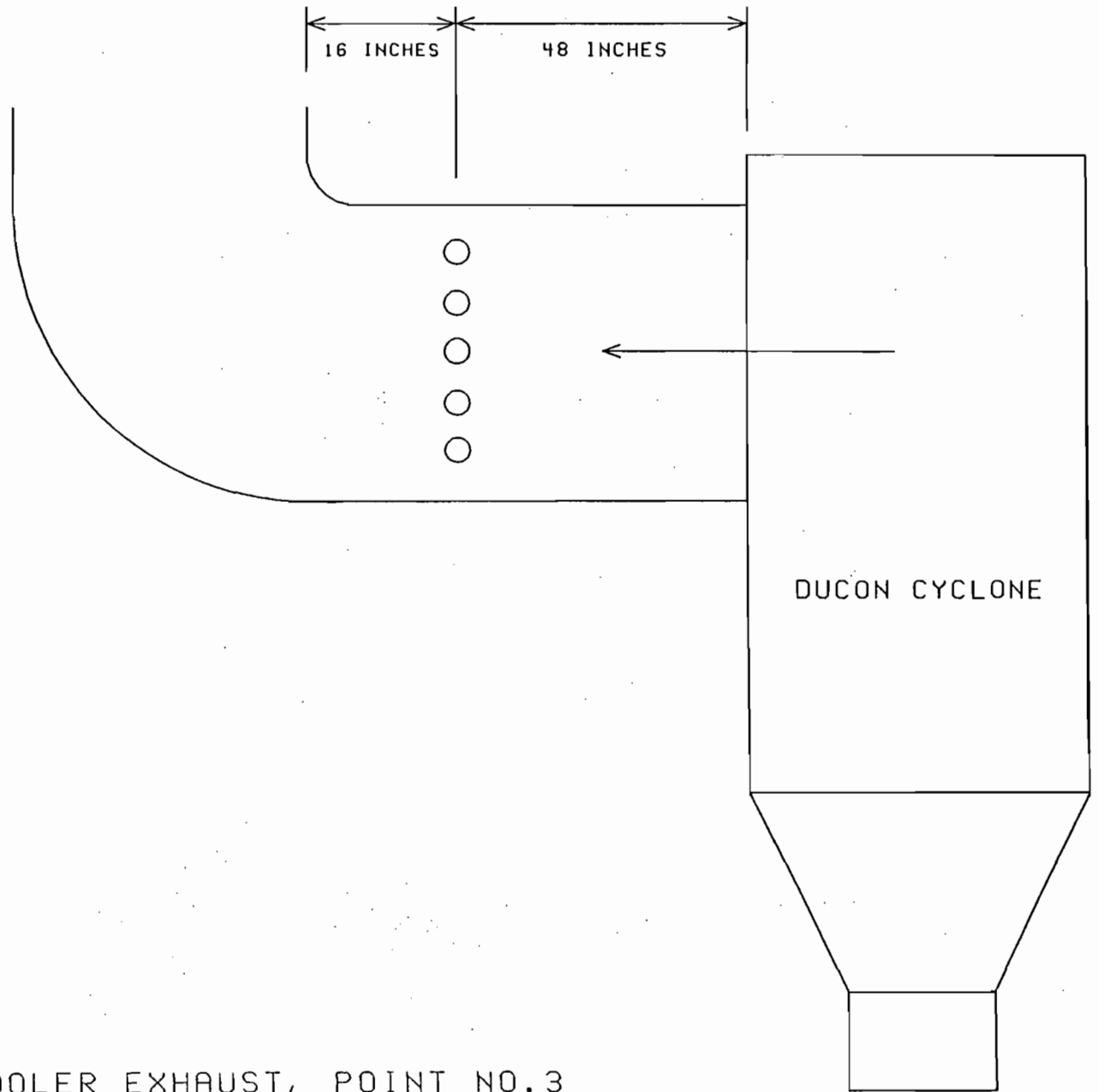
(4 TRAVERSES)

POINT NO.	INCHES INSIDE STACK WALL
1	1.9
2	6.0
3	10.6
4	15.9
5	22.4
6	31.9

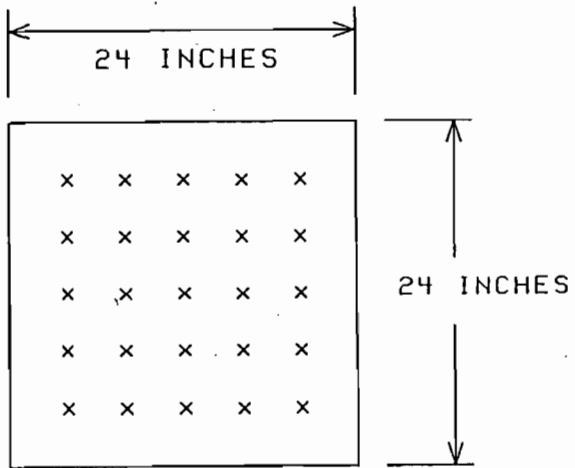
ROASTER AFTERBURNER, POINT NO.2

POINT NO.	INCHES INSIDE STACK WALL
1	2.4
2	7.2
3	12.0
4	16.8
5	21.6

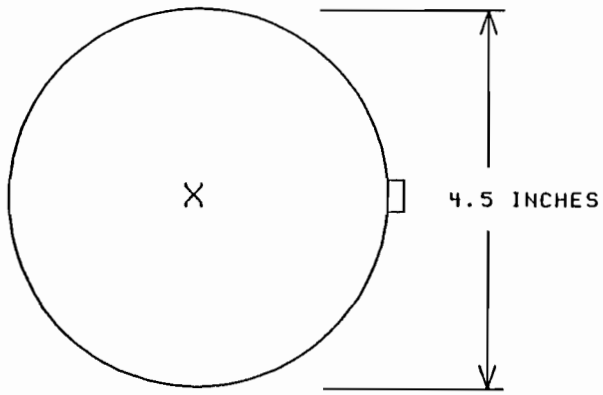
5 TRAVERSES
(SLIDING PORT)



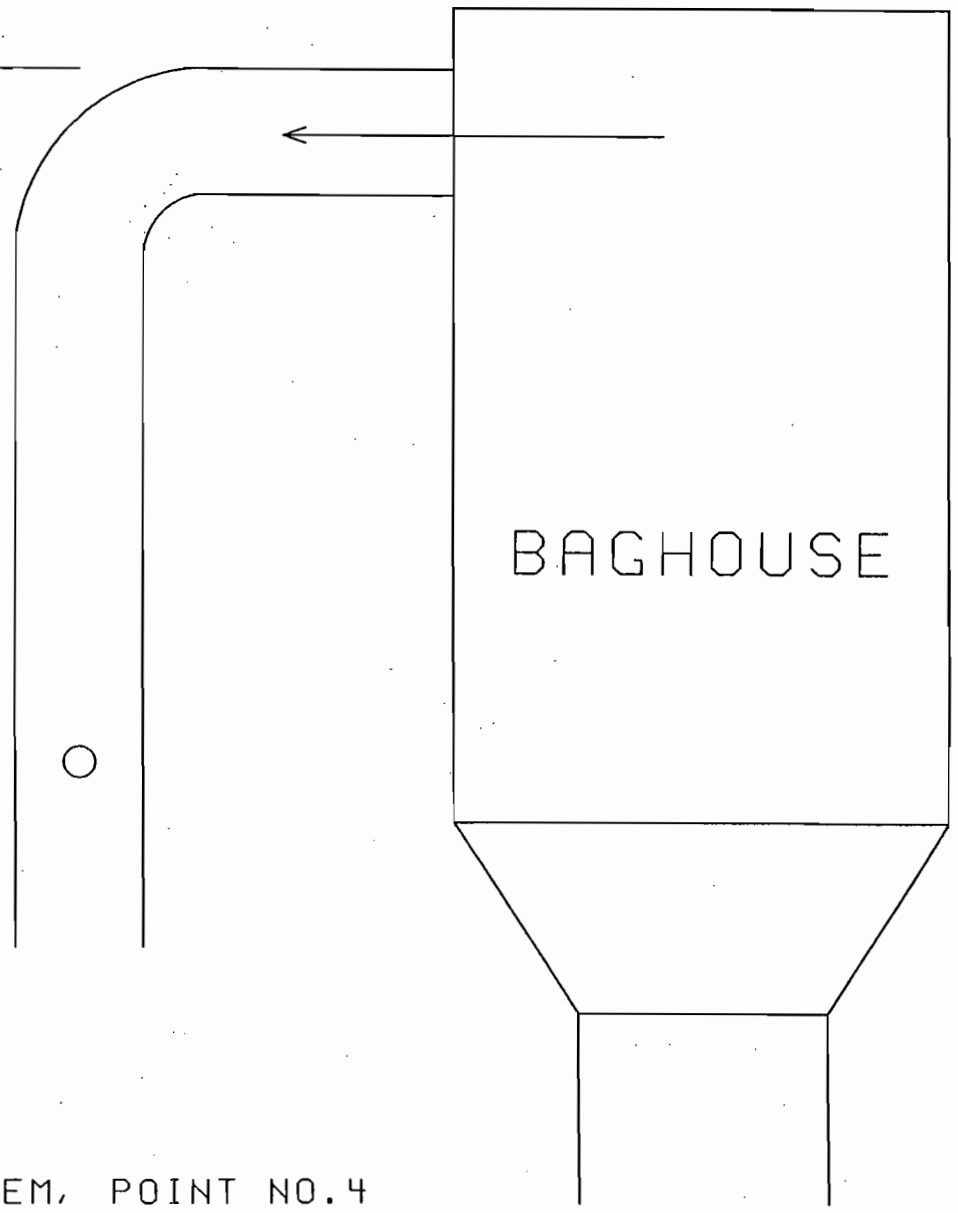
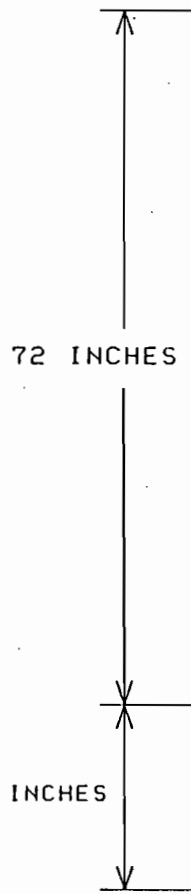
6



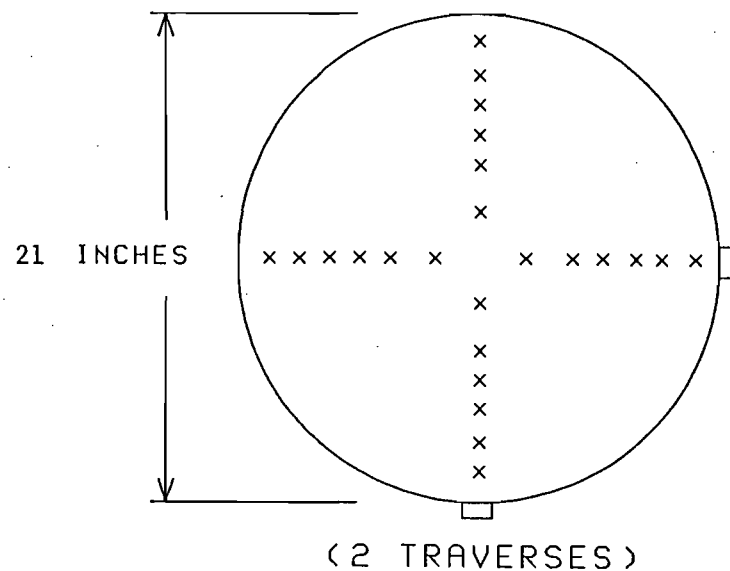
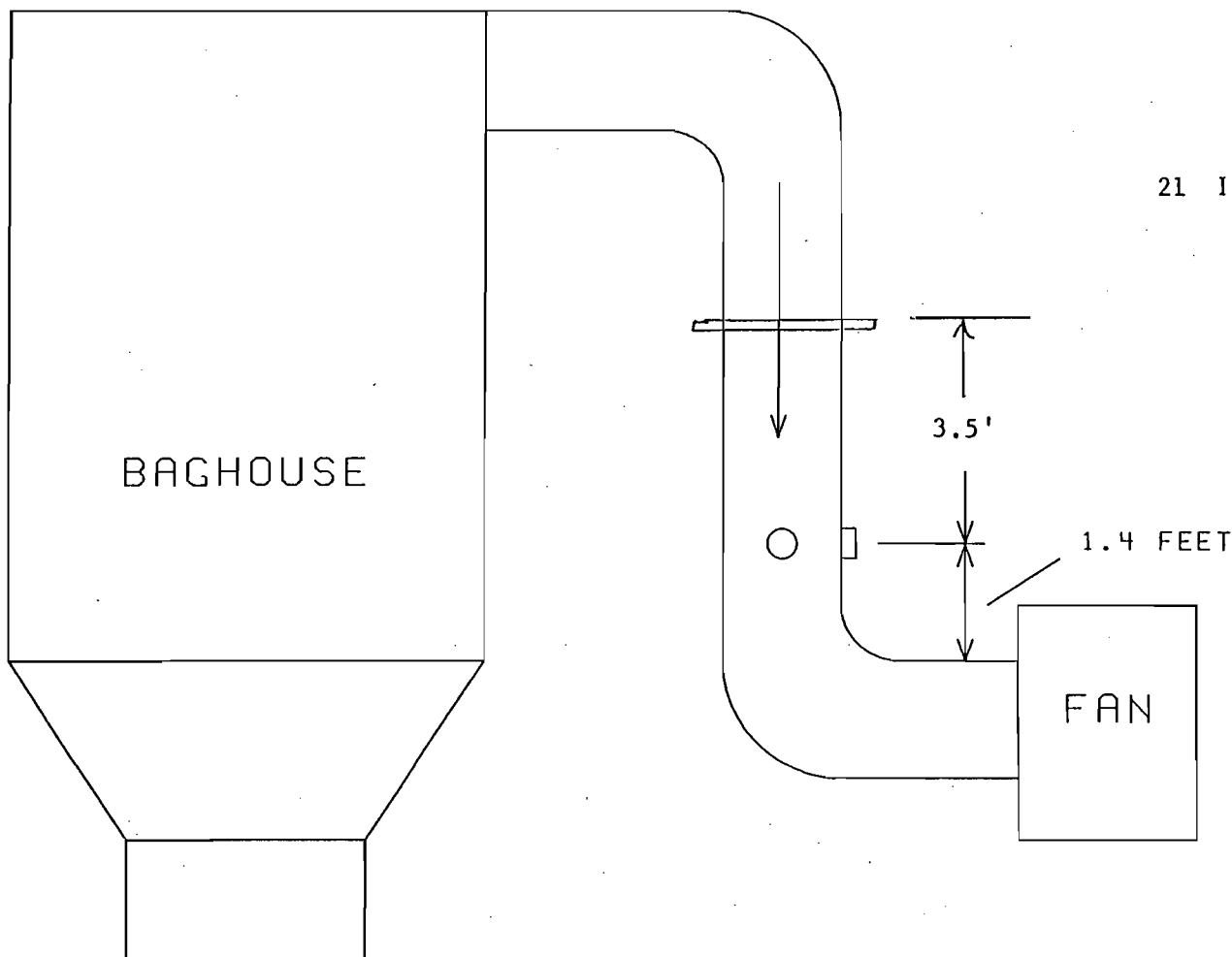
ITR COOLER EXHAUST, POINT NO.3



ONE POINT, MIDDLE

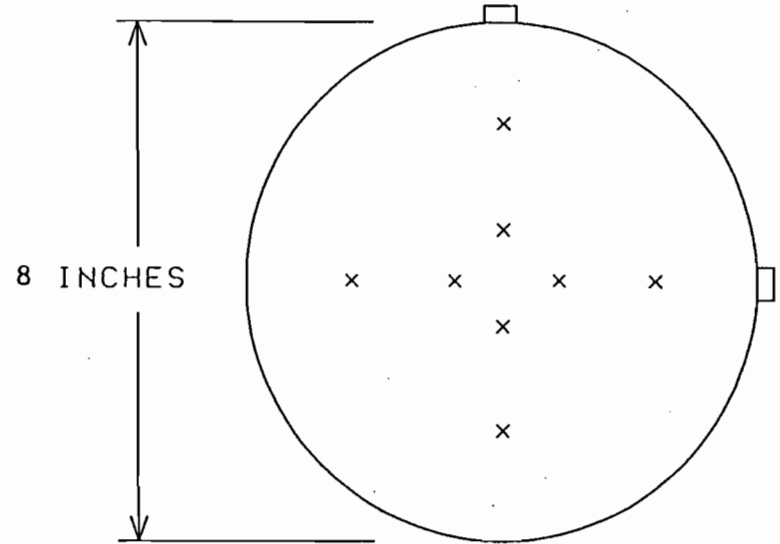
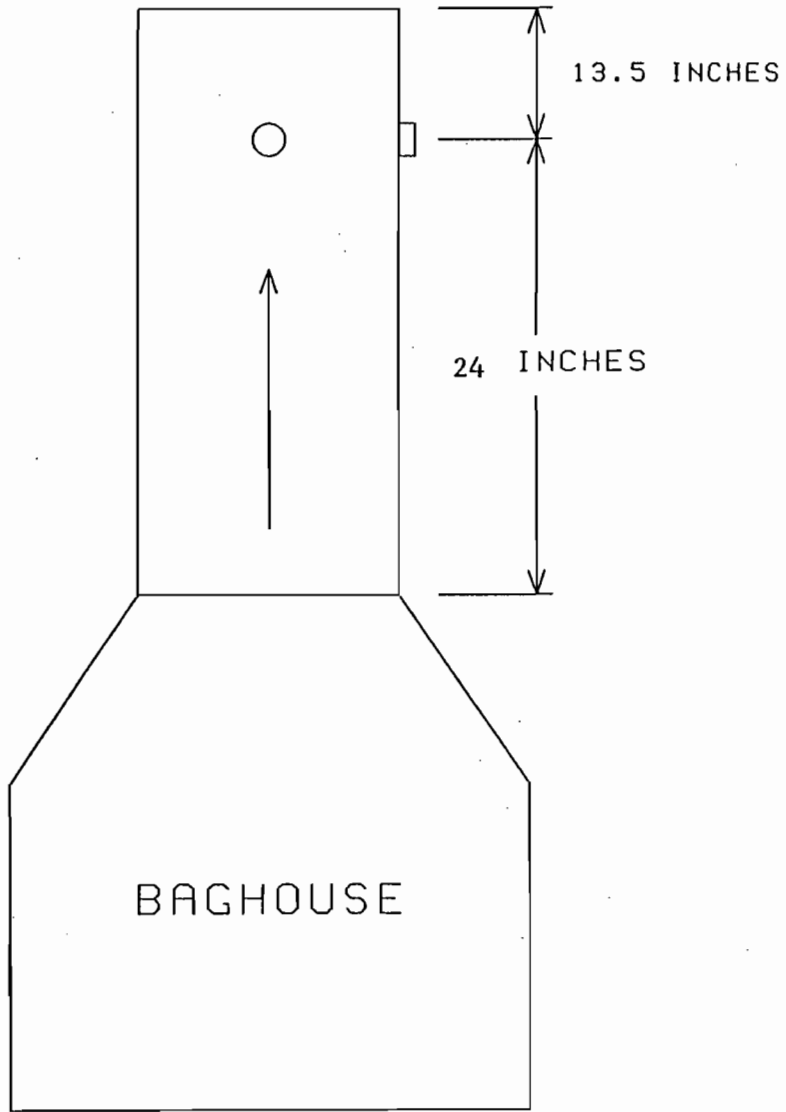


STONER PRODUCT HANDLING SYSTEM, POINT NO.4



POINT NO.	INCHES INSIDE STACK WALL
1	0.5
2	1.4
3	2.5
4	3.7
5	5.3
6	7.5
7	13.5
8	15.8
9	17.3
10	18.5
11	19.6
12	20.5

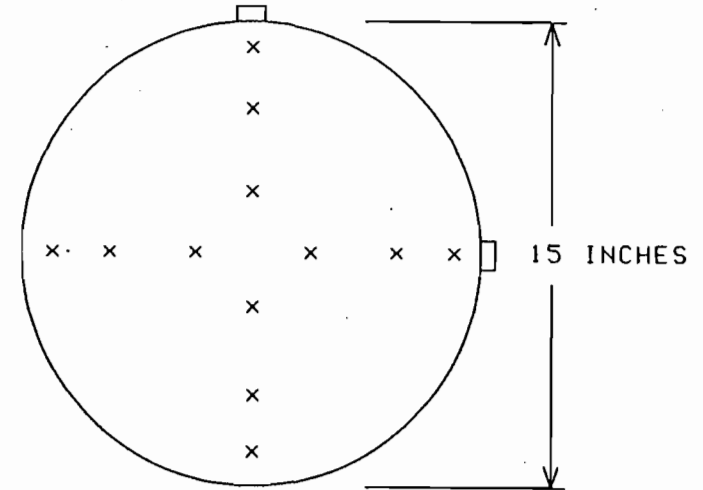
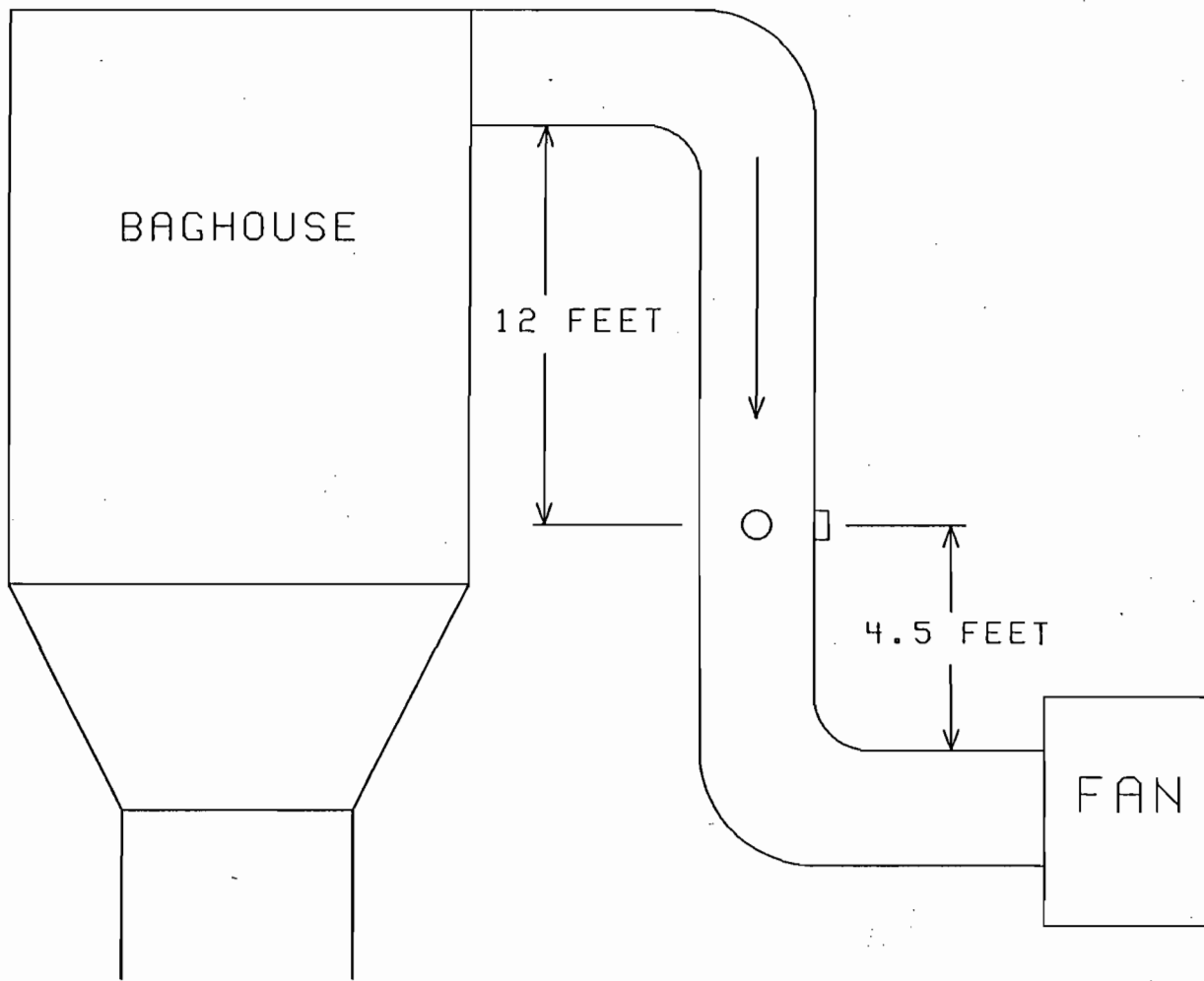
POLLUTANT FROM THE STONER, POINT NO.5



(2 TRAVERSES)

POINT NO.	INCHES INSIDE STACK WALL
1	1.6
2	3.2
3	4.8
4	6.4

PRODUCT BUNKER BAGHOUSE, POINT NO.6



(2 TRAVERSES)

POINT NO.	INCHES INSIDE STACK WALL
1	0.66
2	2.2
3	4.4
4	10.6
5	12.8
6	14.3

PRODUCT TO BAR SYSTEM CYCLONE AND BAGHOUSE, POINT NO.7

V. FIELD AND ANALYTICAL PROCEDURES

SAMPLING

The sampling apparatus consisted of the following:

- 1.) NOZZLE: Stainless steel with a sharp, tapered leading edge.
- 2.) PROBE: Stainless steel sheath with a 5/8 inch O.D. stainless steel insert wrapped with asbestos covered nichrome wire. Rheostat controlled and capable of maintaining a minimum temperature of 250° F.
- 3.) PITOT: Type "S" attached to the probe,
- 4.) FILTER HOLDER: Pyrex glass with fritted-glass filter support.
- 5.) IMPINGERS: Four impingers connected in series with glass ball joint fittings. The first, third and fourth impingers are the modified Greenburg-Smith design. The second impinger is the Greenburg-Smith design with a standard tip.
- 6.) FILTER/IMPINGER BOX: Aluminum module with heating system for maintaining the filter holder at a minimum temperature of 225° F for particulate sampling and an area for the impingers to be placed in an ice bath.
- 7.) CONTROL BOX: Module containing vacuum gauge, leakfree pump, thermometers capable of measuring temperature to within +/- 5° F, dry gas meter with a minimum of two percent accuracy, valves and related equipment as required to maintain an isokinetic sampling rate and to determine sample volume.
- 8.) BAROMETER: Aneroid-type to measure atmospheric pressure to +/- 0.1 inch Hg.

A schematic of the sampling train is shown in Figure 4.

Prior to leaving the laboratory, glass fiber filters (type MSA 1106 BH) had been numbered for identification, desiccated for at least 24 hours, and preweighed to the nearest 0.1 mg. Silica gel (indicating type, 616 mesh) had also been preweighed to approximately 200 g after drying at 175° F for two hours.

The sample train was prepared in the following manner:

To each of the first and second impingers, 100 ml of distilled water was added. The third impinger was empty to act as a moisture trap, and the preweighed silica gel was added to the fourth impinger. A numbered and preweighed filter had previously been installed in the Pyrex glass filter holder using tweezers or clean disposable gloves, the

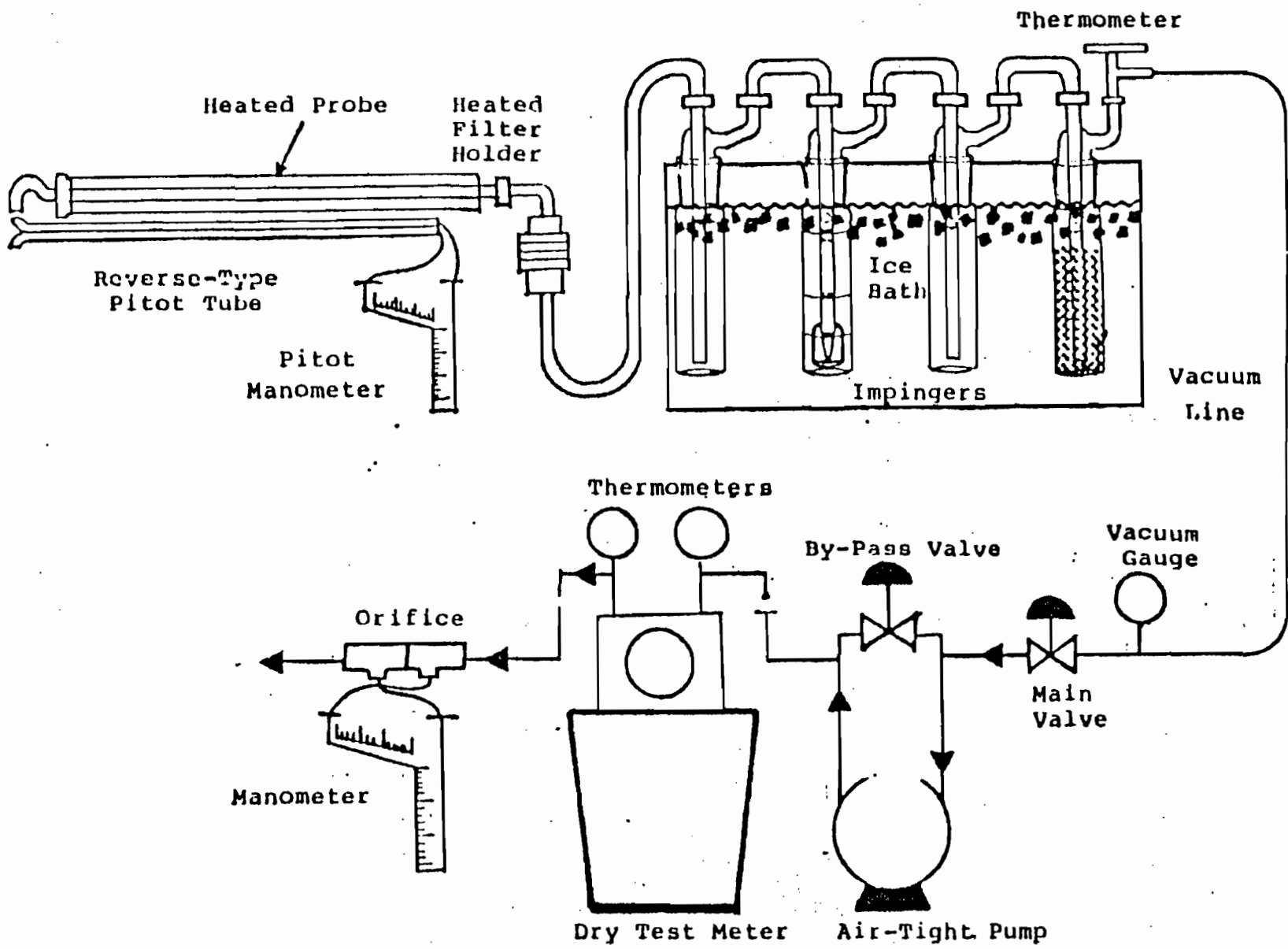


FIGURE 4

holder assembled and the ends plugged to prevent entrance of extraneous matter. After assembling the train with the probe as shown in the schematic, the system was leak checked by plugging the inlet to the probe nozzle and pulling a 15-inch Hg vacuum. A leakage rate not in excess of 0.02 cfm was considered acceptable.

The inside dimensions of each stack were measured and recorded. The number of sampling points and the location of these points on a traverse were determined by the guidelines set forth in the *Federal Register*, Vol. 36, No. 247, Sec. 60.85, Method 1. These points were then marked on the probe for easy visibility.

A preliminary traverse was conducted to determine the range of velocity head and the pressure of the stack. A wet-bulb and a dry-bulb temperature were taken to determine stack temperature and moisture. From this data, the correct nozzle size and the nomograph correction factor were determined.

The probe was attached and the heater was adjusted to provide a gas temperature of approximately 250° F. The filter heating system was turned on (during particulate sampling) and crushed ice was placed around the impingers. After suitable warmup period, the nozzle was placed on the first traverse point with the tip pointing directly into the gas stream. The pump was started immediately and the flow was adjusted to isokinetic conditions. After the required time interval had elapsed, the probe was repositioned to the next traverse point and isokinetic sampling was reestablished. This was done for each point on the traverse until the run was completed. Readings were taken at least every five minutes or when significant changes in stack conditions necessitated additional adjustments in flow rate. At the conclusion of each run, the pump was turned off and the final readings were recorded. A final leak check of the system was performed as previously described. Pitot lines were also leak checked by blowing through each leg alternately to an indicated velocity head of at least three inches (as H₂O) and sealing off the opening. A stable reading maintained for at least fifteen seconds indicated a satisfactory leak check.

PARTICULATE SAMPLE RECOVERY

Care was exercised in moving the collection train to the sample recovery area to minimize the loss of collected sample or the gain of extraneous particulate matter. The volume of water in the first three impingers was measured and recorded on the field data sheet. The probe, nozzle, and all sample-exposed surfaces were washed with reagent grade acetone and put into a clean sample bottle marked "prefilter". A brush was used to loosen any adhering particulate matter and subsequent washings were put into the "prefilter" container. Silicone grease was wiped from the ground glass joints of the filter holder and the ends sealed for transport to the laboratory. The silica gel was removed from the fourth impinger and transferred to its original container. A sample of the acetone used in washing the probe was saved for a blank laboratory analysis. "Prefilter" and "blank" containers were clearly marked for identification and also liquid level marked on each to determine if leakage occurs during transport to the laboratory. All containers are sealed and stored for transport.

PARTICULATE ANALYTICAL PROCEDURES

The filter holder was opened and the filter transferred to a clean, tared glass weighing dish using forceps or clean disposable gloves. Any loose particulate matter was transferred using a stainless steel spatula. The filter was placed in a desiccator for at least 24 hours, reweighed and this process continued until constant weight was maintained. The original weight of the filter was deducted and the weight gain recorded to the nearest 0.1 mg.

The liquid level of the "prefilter" solution was noted and the volume measured. This solution was transferred to a clean, tared beaker. After all joints of the filter holder were wiped free of silicone grease, the inside of the front half was cleaned by rubbing with a nylon brush and rinsing with water until no visible particulate remained and a final rinse of holder and brush made. All these washings are measured and added to the "prefilter" solution. This solution is evaporated to dryness below the boiling point of the liquid, the container and contents desiccated for 24 hours and weighed to constant weight. After subtracting tare weights, the weight gain was recorded to the nearest 0.1 mg.

APPENDIX A
COMPLETE EMISSION DATA

McKEE ENVIRONMENTAL SERVICES — EQUATIONS FOR PARTICULATE EMISSIONS

$$V_{wv} = 0.04707 \times V_c$$

$$V_m = (M_f - M_i) \times Y$$

$$V_{stpd} = [(D_h / 13.6) + P_b] \times V_m \times (528 / 29.92) / T_m$$

$$V_t = V_{wv} / V_{stpd}$$

$$W = V_{wv} / V_t$$

$$FDA = 1.0 / W$$

$$M_d = (0.44 \times \%CO_2) + (0.32 \times \%O_2) + (0.28 \times \%N_2) + (0.28 \times \%CO)$$

$$M_s = (M_d \times FDA) + (18 \times W)$$

$$G_s = (M_s) / 28.99$$

$$U = 85.49 \times C_p \times D_p \times [T_s / (P_s \times M_s)]^{1/2} \times 60$$

$$A_s = 3.1415927 \times (D_s / 2)^2 / 144$$

$$Q_s = U \times A_s$$

$$Q_d = Q_s \times FDA$$

$$Q_t = (1 - W) \times U \times A_s \times (528 / T_s) \times (P_s / 29.92)$$

$$P_o = P_b + (D_h / 13.6)$$

$$A_n = 3.1415927 \times (D_n / 2)^2 / 144$$

$$P_{iso} = [(29.92 \times 100 / 528) \times T_s \times V_{stpd}] / [P_o \times U \times A_n \times T_t \times (1 - W)]$$

$$E_{stp} = [(mg / 1000) \times 15.43] / V_{stpd}$$

$$E_m = (E_{stp} \times Q_t \times 60) / 7000$$

NOTES: All temperatures are expressed in degrees Rankine. D_p denotes the average of the velocity heads' square roots. D_h denotes the arithmetic average of the meter pressure differentials.

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 26 FEBRUARY, 1990

ITR AFTERBURNER START TIME: 940

METHOD #5 END TIME: 1053

METER NUMBER	METER	STACK	METER STACK			PS=	30.54	INCHES OF Hg	
			DH	DP	SQR DP				
1	BAROMETRIC PRESSURE	30.52	1	2.80	0.025	0.16	MD=	29.080	LBS/LB-MOLE, DRY
2	TOTAL TIME	60	2	2.20	0.020	0.14	MG=	11.5	MG TOTAL CATCH
3	NO. OF TRAVERSE POINTS	24	3	0.56	0.005	0.07	VWV=	9.820	CUBIC FT, STP CONDITIONS
4	DIAMETER OF STACK	89.6	4	0.56	0.005	0.07	DH=	2.12	INCHES OF H2O- METER BOX
5	TEMP OF STACK DEG F	995	5	0.56	0.005	0.07	TM=	527	DEGREES R
6	INITIAL GAS METER	86.397	6	0.56	0.005	0.07	VM=	43.659	CUBIC FT, METER COND
7	FINAL GAS METER	130.056	7	3.80	0.035	0.19	VSTPD=	44.723	CUBIC FT, STP & DRY COND
8	TEMP OF METER	0.997	8	3.30	0.030	0.17	VT=	54.544	CUBIC FT STP CONDITIONS
9	TEMP OF METER	67	9	2.70	0.025	0.16	W=	0.1800	MOISTURE FRACT STACK GAS
10	STATIC PRESS. IN. H2O	0.30	10	2.40	0.022	0.15	FDA=	0.8200	DRY GAS FRACTION
11	WATER GEL WT. GAIN	10.5	11	1.60	0.015	0.12	FO=	0	FUEL TYPE
12	CONDENSATE	198	12	1.30	0.012	0.11	EA=	225.63	PERCENT EXCESS AIR
13	TOT CORR. FACTOR	0.84	13	4.40	0.040	0.20	MS=	27.085	LBS/LB-MOLE, STACK COND
14	DIAMETER OF NOZZLE	0.75	14	4.40	0.040	0.20	GS=	0.93	REFERRED TO AIR
15	CO2	3	15	3.30	0.030	0.17	VC=	208.5	MILLILITERS
16		15	16	1.60	0.015	0.12	DP=	0.1327	INCHES OF H2O- STACK
17		0	17	1.60	0.015	0.12	TS=	1455	DEGREES R
18	N2	82	18	1.60	0.015	0.12	U=	13	FEET PER SECOND
19	FILTER WT. GRAMS	0.0071	19	3.30	0.030	0.17	AS=	43.79	SQUARE FEET
20	WATER WEIGHT GRAMS	0.0044	20	3.50	0.032	0.18	QS=	33217	CUBIC FT/MIN STACK COND
21	TOTAL GRAMS	0.0115	21	2.20	0.020	0.14	QD=	27237	CUBIC FT/MIN DRY COND
22			22	1.10	0.010	0.10	QSTPD=	10084	CUBIC FT/MIN STP & DRY
23			23	1.10	0.010	0.10	PM=	30.68	ABS PRESS OF METER, IN Hg
24			24	0.55	0.005	0.07	AN=	0.003068	SQUARE FEET
25			25	0.00	0.000	0.00	ESTP=	0.0040	GRAINS/DSCF
							PISO=	105.52	% ISOKINETIC
							EM=	0.34	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 26 FEBRUARY, 1990

ITR AFTERBURNER START TIME: 1112

METHOD #5 END TIME: 1235

		METER STACK				
IN NUMBER		DH	DP	SQR DP		
26/90					PS=	30.54 INCHES OF Hg
BAROMETRIC PRESSURE	30.52	1 3.60	0.035	0.19	MD=	29.080 LBS/LB-MOLE, DRY
TOTAL TIME	60	2 2.90	0.028	0.17	MG=	12.8 MG TOTAL CATCH
NO. OF TRAVERSE POINTS	24	3 2.40	0.023	0.15	VWV=	10.315 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	89.6	4 1.50	0.015	0.12	DH=	1.919 INCHES OF H2O- METER BOX
TEMP OF STACK	1005.38	5 1.00	0.015	0.12	TM=	528.5 DEGREES R
INITIAL GAS METER	30.52	6 1.00	0.010	0.10	VM=	41.162 CUBIC FT, METER COND
FINAL GAS METER	71.682	7 4.10	0.040	0.20	VSTPD=	41.998 CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8 3.10	0.030	0.17	VT=	52.313 CUBIC FT STP CONDITIONS
TEMP OF METER	69	9 3.30	0.032	0.18	W=	0.1972 MOISTURE FRACT STACK GAS
BAROMETRIC PRESS. IN. H2O	0.30	10 3.30	0.032	0.18	FDA=	0.8028 DRY GAS FRACTION
WATER GEL WT. GAIN	9	11 1.00	0.010	0.10	FO=	0 FUEL TYPE
CONDENSATE	210	12 0.80	0.008	0.09	EA=	225.63 PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13 2.80	0.030	0.17	MS=	26.895 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.75	14 3.10	0.025	0.16	GS=	0.93 REFERRED TO AIR
CO2	3	15 2.50	0.020	0.14	VC=	219 MILLILITERS
	15	16 2.00	0.005	0.07	DP=	0.130 INCHES OF H2O- STACK
	0	17 0.51	0.005	0.07	TS=	1465.375 DEGREES R
N2	82	18 0.51	0.022	0.15	U=	13 FEET PER SECOND
HEP FILTER WT. GRAMS	0.0059	19 2.30	0.022	0.15	AS=	43.79 SQUARE FEET
WATER WEIGHT GRAMS	0.0069	20 2.30	0.005	0.07	QS=	32857 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0128	21 0.51	0.005	0.07	QD=	26378 CUBIC FT/MIN DRY COND
		22 0.51	0.005	0.07	QSTPD=	9698 CUBIC FT/MIN STP & DRY
		23 0.51	0.005	0.07	PM=	30.66 ABS PRESS OF METER, IN Hg
		24 0.51	0.027	0.16	AN=	0.003068 SQUARE FEET
		25 0.00	0.000	0.00	ESTP=	0.0047 GRAINS/DSCF
					PISO=	103.03 % ISOKINETIC
					EM=	0.39 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE, JAX FL - 26 FEBRUARY, 1990

ITR AFTERBURNER START TIME: 1405

METHOD #5 END TIME: 1514

		METER STACK				
		<u>DH</u>	<u>DP</u>	<u>SQR DP</u>		
2/26/90						
IN NUMBER	3				PS= 30.54	INCHES OF Hg
BAROMETRIC PRESSURE	30.52	1 1.00	0.010	0.10	MD= 29.080	LBS/LB-MOLE, DRY
TOTAL TIME	60	2 1.00	0.010	0.10	MG= 33.2	MG TOTAL CATCH
NO. OF TRAVERSE POINTS	24	3 1.00	0.010	0.10	VWV= 10.409	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	89.6	4 1.00	0.010	0.10	DH= 1.90	INCHES OF H2O- METER BOX
TEMP OF STACK	1005	5 0.80	0.008	0.09	TM= 526.79167	DEGREES R
WET GAS METER	71.839	6 0.80	0.008	0.09	VM= 41.256	CUBIC FT, METER COND
DRY GAS METER	113.095	7 4.00	0.040	0.20	VSTPD= 42.229	CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8 2.80	0.028	0.17	VT= 52.638	CUBIC FT STP CONDITIONS
TEMP OF METER	67	9 2.50	0.025	0.16	W= 0.1977	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.30	10 1.50	0.015	0.12	FDA= 0.8023	DRY GAS FRACTION
SILICA GEL WT. GAIN	11	11 1.20	0.012	0.11	FO= 0	FUEL TYPE
CONDENSATE	210	12 1.20	0.012	0.11	EA= 225.63	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13 4.00	0.040	0.20	MS= 26.889	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.75	14 3.00	0.030	0.17	GS= 0.93	REFERRED TO AIR
CO2	3	15 2.00	0.020	0.14	VC= 221	MILLILITERS
	15	16 1.40	0.014	0.12	DP= 0.13	INCHES OF H2O- STACK
	0	17 0.80	0.008	0.09	TS= 1465.2083	DEGREES R
N2	82	18 0.80	0.008	0.09	U= 13	FEET PER SECOND
HEFILTER WT. GRAMS	0.0049	19 3.50	0.035	0.19	AS= 43.79	SQUARE FEET
WATER WEIGHT GRAMS	0.0283	20 3.00	0.030	0.17	QS= 33561	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0332	21 2.50	0.025	0.16	QD= 26924	CUBIC FT/MIN DRY COND
		22 2.20	0.022	0.15	QSTPD= 9900	CUBIC FT/MIN STP & DRY
		23 2.00	0.020	0.14	PM= 30.66	ABS PRESS OF METER, IN Hg
		24 1.70	0.017	0.13	AN= 0.003068	SQUARE FEET
		25 0.00	0.000	0.00	ESTP= 0.0121	GRAINS/DSCF
					PISO= 101.48	% ISOKINETIC
					EM= 1.03	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 26 FEBRUARY, 1990

COOLER EXHAUST START TIME: 1610

METHOD #5 END TIME: 1715

26/90			METER STACK					
PIN NUMBER	1		DH	DP	SQR DP	PS=	30.58	INCHES OF Hg
BAROMETRIC PRESSURE	30.54	1	2.20	1.700	1.30	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	62.5	2	2.00	1.500	1.22	MG=	5.3	MG TOTAL CATCH
# OF TRAVERSE POINTS	25	3	1.70	1.300	1.14	VWV=	1.743	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	24 X 24	4	1.10	0.850	0.92	DH=	1.13	INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	101.04	5	0.81	0.620	0.79	TM=	523.56	DEGREES R
POTENTIAL GAS METER	13.35	6	2.00	1.500	1.22	VM=	31.836	CUBIC FT, METER COND
REAL GAS METER	45.186	7	2.00	1.500	1.22	VSTPD=	32.749	CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8	1.70	1.300	1.14	VT=	34.491	CUBIC FT STP CONDITIONS
TEMP OF METER	64	9	1.70	1.300	1.14	W=	0.0505	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.50	10	1.00	0.800	0.89	FDA=	0.9495	DRY GAS FRACTION
SILICA GEL WT. GAIN	7	11	0.91	0.700	0.84	FO=	0	FUEL TYPE
CONDENSATE	30	12	0.91	0.700	0.84	EA=	-14583.33	PERCENT EXCESS AIR
WET CORR. FACTOR	0.84	13	0.88	0.680	0.82	MS=	28.292	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	0.86	0.660	0.81	GS=	0.98	REFERRED TO AIR
NO. 2	0	15	0.83	0.640	0.80	VC=	37	MILLILITERS
NO. 21	21	16	0.88	0.680	0.82	DP=	0.8811	INCHES OF H2O- STACK
NO. 17	0	17	0.88	0.670	0.82	TS=	561.04	DEGREES R
NO. 18	79	18	0.88	0.670	0.82	U=	51	FEET PER SECOND
HEP FILTER WT. GRAMS	0.0038	19	0.88	0.670	0.82	AS=	4.00	SQUARE FEET
FILTER WEIGHT GRAMS	0.0015	20	0.84	0.650	0.81	QS=	12229	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0053	21	0.68	0.530	0.73	QD=	11611	CUBIC FT/MIN DRY COND
		22	0.65	0.500	0.71	QSTPD=	11163	CUBIC FT/MIN STP & DRY
		23	0.65	0.500	0.71	PM=	30.62	ABS PRESS OF METER, IN Hg
		24	0.61	0.470	0.69	AN=	0.000185	SQUARE FEET
		25	0.70	0.540	0.00	ESTP=	0.0025	GRAINS/DSCF
						PISO=	101.70	% ISOKINETIC
						EM=	0.24	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 26 FEBRUARY, 1990

COOLER EXHAUST START TIME: 1726

METHOD #5 END TIME: 1925

26/90			METER STACK					
PI/N NUMBER	2		DH	DP	SQR DP	PS=	30.58	INCHES OF Hg
BAROMETRIC PRESSURE	30.54	1	2.10	1.600	1.26	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	62.5	2	2.10	1.600	1.26	MG=	5.4	MG TOTAL CATCH
# OF TRAVERSE POINTS	25	3	1.70	1.300	1.14	VVW=	1.766	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	24 X 24	4	1.10	0.900	0.95	DH=	1.099	INCHES OF H2O- METER BOX
TEMP OF STACK	99.80	5	0.80	0.600	0.77	TM=	521.56	DEGREES R
INITIAL GAS METER	45.326	6	2.00	1.500	1.22	VM=	32.244	CUBIC FT, METER COND
FINAL GAS METER	77.57	7	2.00	1.500	1.22	VSTPD=	33.293	CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8	1.60	1.200	1.10	VT=	35.059	CUBIC FT STP CONDITIONS
BAROMETRIC PRESS. IN. H2O	62	9	1.60	1.300	1.14	W=	0.0504	MOISTURE FRACT STACK GAS
SILICA GEL WT. GAIN	0.50	10	0.90	0.750	0.87	FDA=	0.9496	DRY GAS FRACTION
CONDENSATE	6.5	11	0.84	0.650	0.81	FO=	0	FUEL TYPE
TOT CORR. FACTOR	31	12	0.84	0.650	0.81	EA=	-14583.33	PERCENT EXCESS AIR
DIAMETER OF NOZZLE	0.84	13	0.88	0.680	0.82	MS=	28.294	LBS/LB-MOLE, STACK COND
CO	0.184	14	0.84	0.640	0.80	GS=	0.98	REFERRED TO AIR
	0	15	0.70	0.580	0.76	VC=	37.5	MILLILITERS
	21	16	0.90	0.700	0.84	DP=	0.900	INCHES OF H2O- STACK
	0	17	0.90	0.700	0.84	TS=	559.80	DEGREES R
	79	18	0.84	0.650	0.81	U=	52	FEET PER SECOND
FILTER WT. GRAMS	0.0042	19	0.84	0.650	0.81	AS=	4.00	SQUARE FEET
FILTER WEIGHT GRAMS	0.0012	20	0.84	0.650	0.81	QS=	12471	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0054	21	0.70	0.540	0.73	QD=	11843	CUBIC FT/MIN DRY COND
		22	0.70	0.520	0.72	QSTPD=	11411	CUBIC FT/MIN STP & DRY
		23	0.60	0.450	0.67	PM=	30.62	ABS PRESS OF METER, IN Hg
		24	0.60	0.450	0.67	AN=	0.000185	SQUARE FEET
		25	0.55	0.430	0.66	ESTP=	0.0025	GRAINS/DSCF
						PISO=	101.15	% ISOKINETIC
						EM=	0.24	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE, JAX FL - 26 FEBRUARY, 1990

COOLER EXHAUST START TIME: 1937

METHOD #5 END TIME: 2041

RUN NUMBER	3	METER STACK			PS=	30.58	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.54	1	2.20	1.700	1.30	MD=	28.840 LBS/LB-MOLE, DRY
TOTAL TIME	62.5	2	2.10	1.600	1.26	MG=	5.8 MG TOTAL CATCH
# OF TRAVERSE POINTS	25	3	2.00	1.500	1.22	VWV=	1.931 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	24 X 24	4	1.10	0.900	0.95	DH=	1.10 INCHES OF H2O- METER BOX
TEMP OF STACK	101	5	0.80	0.580	0.76	TM=	525.04 DEGREES R
INITIAL GAS METER	77.851	6	1.80	1.400	1.18	VM=	32.306 CUBIC FT, METER COND
FINAL GAS METER	110.157	7	1.80	1.400	1.18	VSTPD=	33.137 CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	1.70	1.300	1.14	VT=	35.068 CUBIC FT STP CONDITIONS
TEMP OF METER	65	9	1.60	1.200	1.10	W=	0.0551 MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.50	10	1.00	0.800	0.89	FDA=	0.9449 DRY GAS FRACTION
POLYMER GEL WT. GAIN	8	11	0.90	0.720	0.85	FO=	0 FUEL TYPE
CONDENSATE	33	12	0.90	0.700	0.84	EA=	-14583.33 PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.84	0.650	0.81	MS=	28.243 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	0.84	0.650	0.81	GS=	0.97 REFERRED TO AIR
NOZZLE	0	15	0.84	0.650	0.81	VC=	41 MILLILITERS
NOZZLE	21	16	0.88	0.680	0.82	DP=	0.90 INCHES OF H2O- STACK
NOZZLE	0	17	0.80	0.650	0.81	TS=	560.60 DEGERS R
NOZZLE	79	18	0.80	0.650	0.81	U=	52 FEET PER SECOND
HEP FILTER WT. GRAMS	0.004	19	0.80	0.650	0.81	AS=	4.00 SQUARE FEET
HEP FILTER WEIGHT GRAMS	0.0018	20	0.82	0.660	0.81	QS=	12503 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0058	21	0.65	0.500	0.71	QD=	11814 CUBIC FT/MIN DRY COND
		22	0.65	0.500	0.71	QSTPD=	11367 CUBIC FT/MIN STP & DRY
		23	0.60	0.450	0.67	PM=	30.62 ABS PRESS OF METER, IN Hg
		24	0.60	0.400	0.63	AN=	0.000185 SQUARE FEET
		25	0.60	0.400	0.63	ESTP=	0.0027 GRAINS/DSCF
						PISO=	101.05 % ISOKINETIC
						EM=	0.26 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 27 FEBRUARY, 1990

BAR SYSTEM BH START TIME: 1250

METHOD #5 END TIME: 1352

RUN NUMBER	METER	STACK			PS=	INCHES OF Hg
		DH	DP	SQR DP		
BAROMETRIC PRESSURE	30.62	1	1.40	1.05	1.02	MD= 29.080 LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.30	1.00	1.00	MG= 2.3 MG TOTAL CATCH
NO. OF TRAVERSE POINTS	12	3	1.20	0.90	0.95	VWV= 0.966 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	15	4	1.05	0.80	0.89	DH= 1.07 INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	83	5	1.20	0.93	0.96	TM= 530 DEGREES R
INITIAL GAS METER	13.037	6	0.95	0.73	0.85	VM= 34.004 CUBIC FT, METER COND
FINAL GAS METER	47.041	7	0.14	1.10	1.05	VSTPD= 34.639 CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	1.30	0.99	0.99	VT= 35.605 CUBIC FT STP CONDITIONS
TEMP OF METER	70	9	1.30	0.97	0.98	W= 0.0271 MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	-9.80	10	1.10	0.84	0.92	FDA= 0.9729 DRY GAS FRACTION
WATER GEL WT. GAIN	10.5	11	0.95	0.72	0.85	FO= 0 FUEL TYPE
CONDENSATE	10	12	0.95	0.70	0.84	EA= 225.63 PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.00	0.00	0.00	MS= 28.780 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	0.00	0.00	0.00	GS= 0.99 REFERRED TO AIR
NO. 2	3	15	0.00	0.00	0.00	VC= 20.5 MILLILITERS
	15	16	0.00	0.00	0.00	DP= 0.9431 INCHES OF H2O- STACK
	0	17	0.00	0.00	0.00	TS= 543 DEGERRS R
	82	18	0.00	0.00	0.00	U= 53.81 FEET PER SECOND
REFILTER WT. GRAMS	0.0008	19	0.00	0.00	0.00	AS= 1.23 SQUARE FEET
FILTER WEIGHT GRAMS	0.0015	20	0.00	0.00	0.00	QS= 3962 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0023	21	0.00	0.00	0.00	QD= 3954 CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD= 3743 CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM= 30.70 ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN= 0.000125 SQUARE FEET
		25	0.00	0.00	0.00	ESTP= 0.0010 GRAINS/DSCF
						PISO= 102.53 % ISOKINETIC
						EM= 0.03 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 27 FEBRUARY, 1990

BAR SYSTEM BH START TIME: 1405

METHOD #5 END TIME: 1507

		METER STACK						
		DH	DP	SQR DP				
UN NUMBER	2				PS=	29.78	INCHES OF Hg	
BAROMETRIC PRESSURE	30.50	1	1.40	1.05	1.02	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.40	1.05	1.02	MG=	2.7	MG TOTAL CATCH
NO. OF TRAVERSE POINTS	12	3	1.30	1.00	1.00	VWV=	0.942	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	15	4	1.20	0.92	0.96	DH=	1.20	INCHES OF H2O- METER BOX
TEMP OF STACK	78.9167	5	1.10	0.84	0.92	TM=	535.66667	DEGREES R
INITIAL GAS METER	47.222	6	0.95	0.72	0.85	VM=	33.590	CUBIC FT, METER COND
FINAL GAS METER	80.812	7	1.40	1.10	1.05	VSTPD=	33.733	CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8	1.30	1.00	1.00	VT=	34.675	CUBIC FT STP CONDITIONS
TEMP OF METER	76	9	1.30	0.95	0.97	W=	0.0272	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	-9.80	10	1.10	0.84	0.92	FDA=	0.9728	DRY GAS FRACTION
WETTED GEL WT. GAIN	11	11	0.95	0.70	0.84	FO=	0	FUEL TYPE
CONDENSATE	9	12	0.95	0.70	0.84	EA=	*****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.00	0.00	0.00	MS=	28.546	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	0.00	0.00	0.00	GS=	0.98	REFERRED TO AIR
CO2	0	15	0.00	0.00	0.00	VC=	20	MILLILITERS
CO	21	16	0.00	0.00	0.00	DP=	0.95	INCHES OF H2O- STACK
SO2	0	17	0.00	0.00	0.00	TS=	538.91667	DEGREES R
NO2	79	18	0.00	0.00	0.00	U=	54.26	FEET PER SECOND
REFILTER WT. GRAMS	0.0009	19	0.00	0.00	0.00	AS=	1.23	SQUARE FEET
WATER WEIGHT GRAMS	0.0018	20	0.00	0.00	0.00	QS=	3995	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0027	21	0.00	0.00	0.00	QD=	3886	CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD=	3788	CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM=	30.59	ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN=	0.000185	SQUARE FEET
		25	0.00	0.00	0.00	ESTP=	0.0012	GRAINS/DSCF
						PISO=	98.65	% ISOKINETIC
						EM=	0.04	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 27 FEBRUARY, 1990

BAR SYSTEM BH START TIME: 1517

METHOD #5 END TIME: 1618

METER NUMBER	3	METER STACK			PS=	29.78	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.50	1	1.40	1.05	1.02	MD=	28.840 LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.40	1.05	1.02	MG=	3.4 MG TOTAL CATCH
NO. OF TRAVERSE POINTS	12	3	1.30	0.95	0.97	VWV=	1.060 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	15	4	1.05	0.78	0.88	DH=	1.17 INCHES OF H2O- METER BOX
TEMP OF STACK	77	5	0.95	0.72	0.85	TM=	536.75 DEGREES R
INITIAL GAS METER	80.917	6	0.95	0.70	0.84	VM=	33.995 CUBIC FT, METER COND
FINAL GAS METER	114.912	7	1.40	1.10	1.05	VSTPD=	34.069 CUBIC FT, STP & DRY COND
DIFF. OF METER	0.997	8	1.30	0.98	0.99	VT=	35.129 CUBIC FT STP CONDITIONS
TEMP OF METER	77	9	1.30	0.98	0.99	W=	0.0302 MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	-9.80	10	1.10	0.82	0.91	FDA=	0.9698 DRY GAS FRACTION
SILICA GEL WT. GAIN	11.5	11	0.95	0.72	0.85	FO=	0 FUEL TYPE
CONDENSATE	11	12	0.95	0.72	0.85	EA=	***** PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.00	0.00	0.00	MS=	28.513 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	0.00	0.00	0.00	GS=	0.98 REFERRED TO AIR
CO2	0	15	0.00	0.00	0.00	VC=	22.5 MILLILITERS
	21	16	0.00	0.00	0.00	DP=	0.94 INCHES OF H2O- STACK
	0	17	0.00	0.00	0.00	TS=	536.58333 DEGERRS R
CO2	79	18	0.00	0.00	0.00	U=	53.39 FEET PER SECOND
HEATER FILTER WT. GRAMS	0.0012	19	0.00	0.00	0.00	AS=	1.23 SQUARE FEET
HEATER WEIGHT GRAMS	0.0022	20	0.00	0.00	0.00	QS=	3931 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0034	21	0.00	0.00	0.00	QD=	3813 CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD=	3733 CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM=	30.59 ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN=	0.000185 SQUARE FEET
		25	0.00	0.00	0.00	ESTP=	0.0015 GRAINS/DSCF
						PISO=	101.11 % ISOKINETIC
						EM=	0.05 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 28 FEBRUARY, 1990

GREEN BEAN FEED START TIME: 947
METHOD #5 END TIME: 1048

	METER	STACK						
		DH	DP	SQR DP				
NO. NUMBER	1				PS=	30.50	INCHES OF Hg	
BAROMETRIC PRESSURE	30.50	1	1.60	0.08	0.28	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.00	0.10	0.32	MG=	3.9	MG TOTAL CATCH
NO. OF TRAVERSE POINTS	16	3	2.20	0.11	0.33	VWV=	1.178	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	8	4	2.40	0.12	0.35	DH=	2.27	INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	87.50	5	2.40	0.12	0.35	TM=	533.44	DEGREES R
INITIAL GAS METER	15.2	6	2.40	0.12	0.35	VM=	47.715	CUBIC FT, METER COND
FINAL GAS METER	62.915	7	2.40	0.12	0.35	VSTPD=	48.244	CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8	2.40	0.12	0.35	VT=	49.421	CUBIC FT STP CONDITIONS
TEMP OF METER	73	9	2.40	0.12	0.35	W=	0.0238	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.00	10	2.40	0.12	0.35	FDA=	0.9762	DRY GAS FRACTION
PLICA GEL WT. GAIN	12	11	2.40	0.12	0.35	FO=	0	FUEL TYPE
CONDENSATE	13	12	2.40	0.12	0.35	EA=	*****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.40	0.12	0.35	MS=	28.582	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.365	14	2.20	0.11	0.33	GS=	0.99	REFERRED TO AIR
CO2	0	15	2.20	0.11	0.33	VC=	25	MILLILITERS
	21	16	2.20	0.11	0.33	DP=	0.3369	INCHES OF H2O- STACK
	0	17	0.00	0.00	0.00	TS=	547.50	DEGREES R
N2	79	18	0.00	0.00	0.00	U=	19.17	FEET PER SECOND
HEFILTER WT. GRAMS	0.0011	19	0.00	0.00	0.00	AS=	0.35	SQUARE FEET
FILTER WEIGHT GRAMS	0.0028	20	0.00	0.00	0.00	QS=	402	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0039	21	0.00	0.00	0.00	QD=	392	CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD=	395	CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM=	30.67	ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN=	0.000727	SQUARE FEET
		25	0.00	0.00	0.00	ESTP=	0.0012	GRAINS/DSCF
						PISO=	100.30	% ISOKINETIC
						EM=	0.004	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 28 FEBRUARY, 1990

GREEN BEAN FEED START TIME: 1102

METHOD #5 END TIME: 1203

	METER	STACK						
		DH	DP	SQR DP				
RUN NUMBER	2				PS=	30.50	INCHES OF Hg	
BAROMETRIC PRESSURE	30.50	1	2.20	0.10	0.32	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.40	0.12	0.35	MG=	6.6	MG TOTAL CATCH
# OF TRAVERSE POINTS	16	3	1.60	0.08	0.28	VWV=	1.154	CUBIC FT, STP. CONDITIONS
DIAMETER OF STACK	8	4	2.20	0.10	0.32	DH=	2.081	INCHES OF H2O- METER BOX
TEMP OF STACK	89.94	5	2.20	0.10	0.32	TM=	545.625	DEGREES R
INITIAL GAS METER	63.048	6	2.20	0.10	0.32	VM=	45.344	CUBIC FT, METER COND
FINAL GAS METER	108.392	7	2.20	0.10	0.32	VSTPD=	44.802	CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	1.60	0.08	0.28	VT=	45.955	CUBIC FT STP CONDITIONS
TEMP OF METER	86	9	2.20	0.10	0.32	W=	0.0251	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.00	10	2.40	0.12	0.35	FDA=	0.9749	DRY GAS FRACTION
WATER GEL WT. GAIN	12.5	11	2.20	0.10	0.32	FO=	0	FUEL TYPE
CONDENSATE	12	12	2.20	0.10	0.32	EA=	*****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.30	0.11	0.33	MS=	28.568	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.365	14	1.80	0.09	0.30	GS=	0.99	REFERRED TO AIR
CO2	0	15	1.80	0.09	0.30	VC=	24.5	MILLILITERS
	21	16	1.80	0.09	0.30	DP=	0.314	INCHES OF H2O- STACK
	0	17	0.00	0.00	0.00	TS=	549.94	DEGREES R
N2	79	18	0.00	0.00	0.00	U=	17.90	FEET PER SECOND
HEATER WT. GRAMS	0.0005	19	0.00	0.00	0.00	AS=	0.35	SQUARE FEET
FILTER WEIGHT GRAMS	0.0061	20	0.00	0.00	0.00	QS=	375	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0066	21	0.00	0.00	0.00	QD=	365	CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD=	358	CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM=	30.65	ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN=	0.000727	SQUARE FEET
		25	0.00	0.00	0.00	ESTP=	0.0023	GRAINS/DSCF
						PISO=	100.34	% ISOKINETIC
						EM=	0.007	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE, JAX FL - 28 FEBRUARY, 1990

GREEN BEAN FEED START TIME: 1214

METHOD #5 END TIME: 1316

RUN NUMBER	3	METER STACK			PS=	30.50	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.50	1	2.20	0.11	0.33	MD= 28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.40	0.12	0.35	MG= 4.2	MG TOTAL CATCH
NO. OF TRAVERSE POINTS	16	3	2.40	0.12	0.35	VWV= 1.319	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	8	4	2.40	0.12	0.35	DH= 2.23	INCHES OF H2O- METER BOX
TEMP OF STACK	88	5	2.40	0.12	0.35	TM= 548.94	DEGREES R
INITIAL GAS METER	8.562	6	2.20	0.11	0.33	VM= 47.496	CUBIC FT, METER COND
FINAL GAS METER	56.058	7	2.00	0.10	0.32	VSTPD= 46.661	CUBIC FT, STP & DRY COND
DIFF. OF METER	0.997	8	2.00	0.10	0.32	VT= 47.979	CUBIC FT STP CONDITIONS
TEMP OF METER	89	9	2.40	0.12	0.35	W= 0.0275	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.00	10	2.40	0.12	0.35	FDA= 0.9725	DRY GAS FRACTION
PLICA GEL WT. GAIN	13	11	2.40	0.12	0.35	FO= 0	FUEL TYPE
CONDENSATE	15	12	2.20	0.11	0.33	EA= *****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.20	0.11	0.33	MS= 28.542	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.365	14	2.00	0.10	0.32	GS= 0.98	REFERRED TO AIR
CO2	0	15	2.00	0.10	0.32	VC= 28	MILLILITERS
	21	16	2.00	0.10	0.32	DP= 0.33	INCHES OF H2O- STACK
	0	17	0.00	0.00	0.00	TS= 548.00	DEGREES R
N2	79	18	0.00	0.00	0.00	U= 18.99	FEET PER SECOND
HEFILTER WT. GRAMS	0.0008	19	0.00	0.00	0.00	AS= 0.35	SQUARE FEET
FILTER WEIGHT GRAMS	0.0034	20	0.00	0.00	0.00	QS= 398	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0042	21	0.00	0.00	0.00	QD= 387	CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD= 380	CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM= 30.66	ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN= 0.000727	SQUARE FEET
		25	0.00	0.00	0.00	ESTP= 0.0014	GRAINS/DSCF
						PISO= 98.40	% ISOKINETIC
						EM= 0.005	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 1 MARCH 1990

POLLUTANT FROM STONER START TIME: 1015
METHOD #5 END TIME: 1116

RUN NUMBER	①	METER STACK			PS=	29.44	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.50	1	2.30	1.80	1.34	MD=	28.840 LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.30	1.80	1.34	MG=	3.7 MG TOTAL CATCH
# OF TRAVERSE POINTS	24	3	2.20	1.70	1.30	VWV=	1.272 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	21	4	2.10	1.60	1.26	DH=	1.93 INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	97	5	2.10	1.60	1.26	TM=	537 DEGREES R
INITIAL GAS METER	56.348	6	2.00	1.50	1.22	VM=	44.040 CUBIC FT, METER COND
FINAL GAS METER	100.388	7	2.00	1.50	1.22	VSTPD=	44.192 CUBIC FT, STP & DRY COND
DIFFERENTIAL METER	0.997	8	2.00	1.50	1.22	VT=	45.464 CUBIC FT STP CONDITIONS
TEMP OF METER	77	9	1.80	1.40	1.18	W=	0.0280 MOISTURE FRACT STACK GAS
BAROMETRIC PRESS. IN. H2O	-14.40	10	1.70	1.30	1.14	FDA=	0.9720 DRY GAS FRACTION
WATER GEL WT. GAIN	12	11	1.40	1.10	1.05	FO=	0 FUEL TYPE
CONDENSATE	15	12	1.40	1.10	1.05	EA=	-14583.33 PERCENT EXCESS AIR
TOTAL CORR. FACTOR	0.84	13	2.30	1.80	1.34	MS=	28.537 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	2.20	1.70	1.30	GS=	0.98 REFERRED TO AIR
CO2	0	15	2.20	1.70	1.30	VC=	27 MILLILITERS
CO	21	16	2.10	1.60	1.26	DP=	1.2142 INCHES OF H2O- STACK
NO2	0	17	2.10	1.60	1.26	TS=	557 DEGERRS R
NO	79	18	2.00	1.50	1.22	U=	71 FEET PER SECOND
HEAVY METAL FILTER WT. GRAMS	0.0024	19	2.00	1.50	1.22	AS=	2.41 SQUARE FEET
FILTER WEIGHT GRAMS	0.0013	20	2.00	1.50	1.22	QS=	10247 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0037	21	1.80	1.40	1.18	QD=	9960 CUBIC FT/MIN DRY COND
		22	1.50	1.20	1.10	QSTPD=	9286 CUBIC FT/MIN STP & DRY
		23	1.40	1.10	1.05	PM=	30.64 ABS PRESS OF METER, IN Hg
		24	1.40	1.10	1.05	AN=	0.000185 SQUARE FEET
		25	0.00	0.00	0.00	ESTP=	0.0013 GRAINS/DSCF
						PISO=	103.34 % ISOKINETIC
						EM=	0.10 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 1 MARCH 1990
 POLLUTANT FROM STONER START TIME: 1127
 METHOD #5 END TIME: 1228

RUN NUMBER	METER	STACK	METER STACK			PS=	29.44	INCHES OF Hg
			DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.50	1	2.50	1.90	1.38	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.30	1.80	1.34	MG=	2.5	MG TOTAL CATCH
# OF TRAVERSE POINTS	24	3	2.30	1.80	1.34	VWV=	1.366	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	21	4	2.20	1.70	1.30	DH=	1.97	INCHES OF H2O- METER BOX
TEMP OF STACK	98.5	5	2.10	1.60	1.26	TM=	547.04167	DEGREES R
INITIAL GAS METER	0.532	6	2.00	1.50	1.22	VM=	44.823	CUBIC FT, METER COND
FINAL GAS METER	45.355	7	2.00	1.50	1.22	VSTPD=	44.160	CUBIC FT, STP & DRY COND
DIFF METER	0.997	8	1.80	1.40	1.18	VT=	45.526	CUBIC FT STP CONDITIONS
TEMP OF METER	87	9	1.80	1.40	1.18	W=	0.0300	MOISTURE FRACT STACK GAS
BAROMETRIC PRESS. IN. H2O	-14.40	10	1.70	1.30	1.14	FDA=	0.9700	DRY GAS FRACTION
SILICA GEL WT. GAIN	13	11	1.60	1.20	1.10	FO=	0	FUEL TYPE
CONDENSATE	16	12	1.40	1.10	1.05	EA=	-14583.33	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.30	1.80	1.34	MS=	28.515	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.184	14	2.30	1.80	1.34	GS=	0.98	REFERRED TO AIR
CO2	0	15	2.20	1.70	1.30	VC=	29	MILLILITERS
	21	16	2.20	1.70	1.30	DP=	1.23	INCHES OF H2O- STACK
CO	0	17	2.10	1.60	1.26	TS=	558.50	DEGREES R
N2	79	18	2.10	1.60	1.26	U=	72	FEET PER SECOND
FILTER WT. GRAMS	0.0021	19	2.10	1.60	1.26	AS=	2.41	SQUARE FEET
FILTER WEIGHT GRAMS	0.0004	20	2.00	1.50	1.22	QS=	10377	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0025	21	1.80	1.40	1.18	QD=	10065	CUBIC FT/MIN DRY COND
		22	1.70	1.30	1.14	QSTPD=	9360	CUBIC FT/MIN STP & DRY
		23	1.40	1.10	1.05	PM=	30.64	ABS PRESS OF METER, IN Hg
		24	1.40	1.10	1.05	AN=	0.000185	SQUARE FEET
		25	0.00	0.00	0.00	COEF=	0.00007	OR AIR / DUCT
						PISO=	102.45	% ISOKINETIC
						EM=	0.07	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 1 MARCH 1990
POLLUTANT FROM STONER START TIME: 1240
METHOD #5 END TIME: 1341

		METER STACK			PS=		
		DH	DP	SQR DP			
UN NUMBER	3				29.24	INCHES OF Hg	
BAROMETRIC PRESSURE	30.30	1	2.30	1.80	1.34	MD= 28.840 LBS/LB-MOLE, DRY	
TOTAL TIME	60	2	2.30	1.80	1.34	MG= 5.8 MG TOTAL CATCH	
NO. OF TRAVERSE POINTS	24	3	2.30	1.80	1.34	YwV= 1.154 CUBIC FT, STP CONDITIONS	
DIAMETER OF STACK	21	4	2.20	1.70	1.30	DH= 1.95 INCHES OF H2O- METER BOX	
TEMP OF STACK	99	5	2.10	1.60	1.26	TM= 547.95833 DEGREES R	
INITIAL GAS METER	45.51	6	2.10	1.60	1.26	VM= 44.654 CUBIC FT, METER COND	
FINAL GAS METER	90.164	7	2.00	1.50	1.22	VSTPD= 43.631 CUBIC FT, STP & DRY COND	
VELOCITY OF METER	0.997	8	1.80	1.40	1.18	VT= 44.785 CUBIC FT STP CONDITIONS	
TEMP OF METER	88	9	1.80	1.40	1.18	W= 0.0258 MOISTURE FRACT STACK GAS	
STATIC PRESS. IN. H2O	-14.40	10	1.70	1.30	1.14	FDA= 0.9742 DRY GAS FRACTION	
SILICA GEL WT. GAIN	11.5	11	1.40	1.10	1.05	FO= 0 FUEL TYPE	
CONDENSATE	13	12	1.40	1.10	1.05	EA= -14583.33 PERCENT EXCESS AIR	
TOT CORR. FACTOR	0.84	13	2.20	1.70	1.30	MS= 28.561 LBS/LB-MOLE, STACK COND	
DIAMETER OF NOZZLE	0.184	14	2.20	1.70	1.30	GS= 0.99 REFERRED TO AIR	
NO. 1	0	15	2.20	1.70	1.30	VC= 24.5 MILLILITERS	
NO. 2	21	16	2.10	1.60	1.26	DP= 1.22 INCHES OF H2O- STACK	
NO. 3	0	17	2.10	1.60	1.26	TS= 558.67 DEGREES R	
NO. 4	79	18	2.10	1.60	1.26	U= 72 FEET PER SECOND	
PREFILTER WT. GRAMS	0.0046	19	2.00	1.50	1.22	AS= 2.41 SQUARE FEET	
FILTER WEIGHT GRAMS	0.0012	20	2.00	1.50	1.22	QS= 10352 CUBIC FT/MIN STACK COND	
TOTAL GRAMS	0.0058	21	1.80	1.40	1.18	QD= 10085 CUBIC FT/MIN DRY COND	
		22	1.70	1.30	1.14	QSTPD= 9312 CUBIC FT/MIN STP & DRY	
		23	1.50	1.20	1.10	PM= 30.44 ABS PRESS OF METER, IN Hg	
		24	1.40	1.10	1.05	AN= 0.000185 SQUARE FEET	
		25	0.00	0.00	0.00	ESTP= 0.0021 GRAINS/DSCF	
						PISO= 101.74 % ISOKINETIC	
						EM= 0.16 LBS PER HOUR	

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 1 MARCH 1990

STONER PRODUCT START TIME: 1400

METHOD #5 END TIME: 1500

RUN NUMBER		METER STACK			PS=	30.19	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.20	1	1.75	0.35	0.59	MD=	28.840 LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.75	0.35	0.59	MG=	4.4 MG TOTAL CATCH
# OF READINGS	12	3	1.65	0.33	0.57	VWV=	1.130 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	4.5	4	1.65	0.33	0.57	DH=	1.63 INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	94	5	1.60	0.32	0.57	TM=	535 DEGREES R
INITIAL GAS METER	90.422	6	1.60	0.32	0.57	VM=	40.932 CUBIC FT, METER COND
FINAL GAS METER	131.354	7	1.60	0.32	0.57	VSTPD=	40.817 CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	1.60	0.32	0.57	VT=	41.947 CUBIC FT STP CONDITIONS
TEMP OF METER	75	9	1.60	0.32	0.57	W=	0.0269 MOISTURE FRACT STACK GAS
BAROMETRIC PRESS. IN. H2O	-0.14	10	1.60	0.32	0.57	FDA=	0.9731 DRY GAS FRACTION
SILICA GEL WT. GAIN	7	11	1.60	0.32	0.57	FO=	0 FUEL TYPE
CONDENSATE	17	12	1.60	0.32	0.57	EA=	***** PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.00	0.00	0.00	MS=	28.548 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.255	14	0.00	0.00	0.00	GS=	0.98 REFERRED TO AIR
CO2	0	15	0.00	0.00	0.00	VC=	24 MILLILITERS
	21	16	0.00	0.00	0.00	DP=	0.5715 INCHES OF H2O- STACK
CO	0	17	0.00	0.00	0.00	TS=	554 DEGERRS R
NO2	79	18	0.00	0.00	0.00	U=	32.89 FEET PER SECOND
HEFILTER WT. GRAMS	0.0038	19	0.00	0.00	0.00	AS=	0.11 SQUARE FEET
FILTER WEIGHT GRAMS	0.0006	20	0.00	0.00	0.00	QS=	218 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0044	21	0.00	0.00	0.00	QD=	212 CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD=	204 CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM=	30.32 ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN=	0.000355 SQUARE FEET
		25	0.00	0.00	0.00	ESTP=	0.0017 GRAINS/DSCF
						PISO=	103.85 % ISOKINETIC
						EM=	0.003 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 1 MARCH 1990

STONER PRODUCT START TIME: 1513

METHOD #5 END TIME: 1613

RUN NUMBER		METER STACK			PS=	30.19	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.20	1	1.60	0.32	0.57	MD= 28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.60	0.32	0.57	MG= 4.6	MG TOTAL CATCH
# OF READINGS	12	3	1.60	0.32	0.57	VWV= 1.130	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	4.5	4	1.70	0.33	0.57	DH= 1.63	INCHES OF H2O- METER BOX
TEMP OF STACK	94.4167	5	1.70	0.33	0.57	TM= 536.25	DEGREES R
INITIAL GAS METER	31.54	6	1.70	0.33	0.57	YM= 40.796	CUBIC FT, METER COND
FINAL GAS METER	72.336	7	1.60	0.32	0.57	VSTPD= 40.566	CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	1.60	0.32	0.57	VT= 41.697	CUBIC FT STP CONDITIONS
TEMP OF METER	76	9	1.60	0.32	0.57	W= 0.0271	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	-0.13	10	1.60	0.32	0.57	FDA= 0.9729	DRY GAS FRACTION
SILICA GEL WT. GAIN	8	11	1.60	0.32	0.57	FO= 0	FUEL TYPE
CONDENSATE	16	12	1.60	0.32	0.57	EA= *****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.00	0.00	0.00	MS= 28.546	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.255	14	0.00	0.00	0.00	GS= 0.98	REFERRED TO AIR
CO2	0	15	0.00	0.00	0.00	VC= 24	MILLILITERS
CO	0	16	0.00	0.00	0.00	DP= 0.57	INCHES OF H2O- STACK
CO2	79	17	0.00	0.00	0.00	TS= 554.41667	DEGREES R
REFILTER WT. GRAMS	0.004	18	0.00	0.00	0.00	U= 32.71	FEET PER SECOND
FILTER WEIGHT GRAMS	0.0006	19	0.00	0.00	0.00	AS= 0.11	SQUARE FEET
TOTAL GRAMS	0.0046	20	0.00	0.00	0.00	QS= 217	CUBIC FT/MIN STACK COND
		21	0.00	0.00	0.00	QD= 211	CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD= 203	CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM= 30.32	ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN= 0.000355	SQUARE FEET
		25	0.00	0.00	0.00	ESTP= 0.0017	GRAINS/DSCF
						PISO= 103.96	% ISOKINETIC
						EM= 0.003	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 1 MARCH 1990
STONER PRODUCT START TIME: 1626
METHOD #5 END TIME: 1726

RUN NUMBER	(3)	METER STACK			PS=	30.14	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	30.15	1	1.65	0.33	0.57	MD= 28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.65	0.33	0.57	MG= 3.9	MG TOTAL CATCH
* OF READINGS	12	3	1.65	0.33	0.57	VWV= 1.154	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	4.5	4	1.65	0.33	0.57	DH= 1.62	INCHES OF H2O- METER BOX
TEMP OF STACK	93	5	1.65	0.33	0.57	TM= 536.16667	DEGREES R
INITIAL GAS METER	72.485	6	1.60	0.32	0.57	VM= 40.879	CUBIC FT, METER COND
FINAL GAS METER	113.364	7	1.60	0.32	0.57	VSTPD= 40.588	CUBIC FT, STP & DRY COND
DIFF METER	0.997	8	1.60	0.32	0.57	VT= 41.742	CUBIC FT STP CONDITIONS
TEMP OF METER	76	9	1.60	0.32	0.57	W= 0.0276	MOISTURE FRACT STACK GAS
BAROMETRIC PRESS. IN. H2O	-0.13	10	1.60	0.32	0.57	FDA= 0.9724	DRY GAS FRACTION
SILICA GEL WT. GAIN	6.5	11	1.60	0.32	0.57	FO= 0	FUEL TYPE
CONDENSATE	18	12	1.60	0.32	0.57	EA= *****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	0.00	0.00	0.00	MS= 28.540	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.255	14	0.00	0.00	0.00	GS= 0.98	REFERRED TO AIR
CO2	0	15	0.00	0.00	0.00	VC= 24.5	MILLILITERS
CO	21	16	0.00	0.00	0.00	DP= 0.57	INCHES OF H2O- STACK
CO2	0	17	0.00	0.00	0.00	TS= 553.41667	DEGREES R
CO2	79	18	0.00	0.00	0.00	U= 32.79	FEET PER SECOND
FILTER WT. GRAMS	0.0028	19	0.00	0.00	0.00	AS= 0.11	SQUARE FEET
FILTER WEIGHT GRAMS	0.0011	20	0.00	0.00	0.00	QS= 217	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0039	21	0.00	0.00	0.00	QD= 211	CUBIC FT/MIN DRY COND
		22	0.00	0.00	0.00	QSTPD= 203	CUBIC FT/MIN STP & DRY
		23	0.00	0.00	0.00	PM= 30.27	ABS PRESS OF METER, IN Hg
		24	0.00	0.00	0.00	AN= 0.000355	SQUARE FEET
		25	0.00	0.00	0.00	ESTP= 0.0015	GRAINS/DSCF
						PISO= 103.79	% ISOKINETIC
						EM= 0.003	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 2 MARCH 1990
PRODUCT BUNKER BH START TIME: 1205
METHOD #5 END TIME: 1306

		METER STACK						
		DH	DP	SQR DP				
TRUN NUMBER	①				PS=	30.02	INCHES OF Hg	
BAROMETRIC PRESSURE	30.02	1	2.20	0.053	0.23	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.05	0.050	0.22	MG=	63	MG TOTAL CATCH
NO. OF TRAVERSE POINTS	16	3	2.05	0.050	0.22	VWV=	1.696	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	8	4	2.05	0.050	0.22	DH=	2.05	INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	108	5	2.05	0.050	0.22	TM=	549	DEGREES R
INITIAL GAS METER	13.734	6	2.50	0.060	0.24	VM=	45.634	CUBIC FT, METER COND
FINAL GAS METER	59.368	7	1.70	0.042	0.20	VSTPD=	44.116	CUBIC FT, STP & DRY COND
TYPE OF METER	0.997	8	2.05	0.050	0.22	VT=	45.811	CUBIC FT STP CONDITIONS
TEMP OF METER	89	9	2.05	0.050	0.22	W=	0.0370	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.00	10	2.05	0.050	0.22	FDA=	0.9630	DRY GAS FRACTION
SILICA GEL WT. GAIN	11	11	2.00	0.048	0.22	FO=	0	FUEL TYPE
CONDENSATE	25	12	2.00	0.048	0.22	EA=	*****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.00	0.048	0.22	MS=	28.439	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.438	14	2.00	0.048	0.22	GS=	0.98	REFERRED TO AIR
NO. 2	0	15	2.00	0.048	0.22	VC=	36	MILLILITERS
NO. 1	21	16	2.00	0.048	0.22	DP=	0.2225	INCHES OF H2O- STACK
NO. 0	0	17	0.00	0.000	0.00	TS=	568	DEGREES R
NO. 79	79	18	0.00	0.000	0.00	U=	13	FEET PER SECOND
REFILTER WT. GRAMS	0.0202	19	0.00	0.000	0.00	AS=	0.35	SQUARE FEET
FILTER WEIGHT GRAMS	0.0428	20	0.00	0.000	0.00	QS=	273	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.063	21	0.00	0.000	0.00	QD=	263	CUBIC FT/MIN DRY COND
		22	0.00	0.000	0.00	QSTPD=	245	CUBIC FT/MIN STP & DRY
		23	0.00	0.000	0.00	PM=	30.17	ABS PRESS OF METER, IN Hg
		24	0.00	0.000	0.00	AN=	0.001046	SQUARE FEET
		25	0.00	0.000	0.00	ESTP=	0.0220	GRAINS/DSCF
						PISO=	100.07	% ISOKINETIC
						EM=	0.05	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 2 MARCH 1990
 PRODUCT BUNKER BH START TIME: 1318
 METHOD #5 END TIME: 1419

PIPN NUMBER	②	METER STACK			PS=	29.95	INCHES OF Hg
		DH	DP	SQR DP			
BAROMETRIC PRESSURE	29.95	1	2.10	0.050	0.22	MD=	28.840 LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.10	0.050	0.22	MG=	86 MG TOTAL CATCH
* OF TRAVERSE POINTS	16	3	2.10	0.050	0.22	VWV=	1.696 CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	8	4	2.10	0.050	0.22	DH=	2.02 INCHES OF H2O- METER BOX
TEMP OF STACK	103.75	5	2.00	0.048	0.22	TM=	553.9375 DEGREES R
INITIAL GAS METER	59.565	6	2.00	0.048	0.22	VM=	45.374 CUBIC FT, METER COND
FINAL GAS METER	104.939	7	2.00	0.048	0.22	VSTPD=	43.359 CUBIC FT, STP & DRY COND
TYPE OF METER	0.997	8	2.00	0.048	0.22	VT=	45.055 CUBIC FT STP CONDITIONS
TEMP OF METER	94	9	2.20	0.052	0.23	W=	0.0376 MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.00	10	2.20	0.052	0.23	FDA=	0.9624 DRY GAS FRACTION
SILICA GEL WT. GAIN	12	11	2.20	0.052	0.23	FO=	0 FUEL TYPE
CONDENSATE	24	12	2.10	0.050	0.22	EA=	***** PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.10	0.050	0.22	MS=	28.432 LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.438	14	1.70	0.042	0.20	GS=	0.98 REFERRED TO AIR
NOZZLE	0	15	1.70	0.042	0.20	VC=	36 MILLILITERS
NOZZLE	21	16	1.70	0.042	0.20	DP=	0.22 INCHES OF H2O- STACK
CO	0	17	0.00	0.000	0.00	TS=	563.75 DEGREES R
NOZZLE	79	18	0.00	0.000	0.00	U=	13 FEET PER SECOND
HEFILTER WT. GRAMS	0.0299	19	0.00	0.000	0.00	AS=	0.35 SQUARE FEET
FILTER WEIGHT GRAMS	0.0561	20	0.00	0.000	0.00	QS=	269 CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.086	21	0.00	0.000	0.00	QD=	259 CUBIC FT/MIN DRY COND
		22	0.00	0.000	0.00	QSTPD=	243 CUBIC FT/MIN STP & DRY
		23	0.00	0.000	0.00	PM=	30.10 ABS PRESS OF METER, IN Hg
		24	0.00	0.000	0.00	AN=	0.001046 SQUARE FEET
		25	0.00	0.000	0.00	ESTP=	0.0306 GRAINS/DSCF
						PISO=	99.39 % ISOKINETIC
						EM=	0.06 LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 2 MARCH 1990
PRODUCT BUNKER BH START TIME: 1432
METHOD #5 END TIME: 1533

		METER STACK						
		DH	DP	SQR DP				
CUN NUMBER	3				PS=	29.95	INCHES OF Hg	
BAROMETRIC PRESSURE	29.95	1	2.50	0.060	0.24	MD=	28.840	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.20	0.052	0.23	MG=	70.4	MG TOTAL CATCH
NO. OF TRAVERSE POINTS	16	3	2.20	0.052	0.23	VWV=	1.813	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	8	4	2.20	0.052	0.23	DH=	2.09	INCHES OF H2O- METER BOX
TEMP OF STACK	101	5	2.20	0.052	0.23	TM=	552.5625	DEGREES R
INITIAL GAS METER	5.218	6	2.10	0.050	0.22	VM=	46.029	CUBIC FT, METER COND
FINAL GAS METER	51.247	7	2.00	0.048	0.22	VSTPD=	44.103	CUBIC FT, STP & DRY COND
TYPE OF METER	0.997	8	2.00	0.048	0.22	VT=	45.916	CUBIC FT STP CONDITIONS
TEMP OF METER	93	9	2.30	0.055	0.23	W=	0.0395	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.00	10	2.30	0.055	0.23	FDA=	0.9605	DRY GAS FRACTION
SILICA GEL WT. GAIN	12.5	11	2.10	0.050	0.22	FO=	0	FUEL TYPE
CONDENSATE	26	12	2.00	0.048	0.22	EA=	*****	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	2.00	0.048	0.22	MS=	28.412	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.438	14	1.80	0.044	0.21	GS=	0.98	REFERRED TO AIR
SO2	0	15	1.80	0.044	0.21	VC=	38.5	MILLILITERS
SO2	21	16	1.80	0.044	0.21	DP=	0.22	INCHES OF H2O- STACK
CO	0	17	0.00	0.000	0.00	TS=	560.8125	DEGREES R
SO2	79	18	0.00	0.000	0.00	U=	13	FEET PER SECOND
PREFILTER WT. GRAMS	0.0267	19	0.00	0.000	0.00	AS=	0.35	SQUARE FEET
FILTER WEIGHT GRAMS	0.0437	20	0.00	0.000	0.00	QS=	273	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0704	21	0.00	0.000	0.00	QD=	262	CUBIC FT/MIN DRY COND
		22	0.00	0.000	0.00	QSTPD=	247	CUBIC FT/MIN STP & DRY
		23	0.00	0.000	0.00	PM=	30.10	ABS PRESS OF METER, IN Hg
		24	0.00	0.000	0.00	AN=	0.001046	SQUARE FEET
		25	0.00	0.000	0.00	ESTP=	0.0246	GRAINS/DSCF
						PISO=	99.24	% ISOKINETIC
						EM=	0.05	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 5 MARCH, 1990

ITR AFTERBURNER START TIME: 1055

METHOD #5 END TIME: 1202

		METER STACK						
		DH	DP	SQR DP				
3/5/90								
RUN NUMBER	1				PS=	30.22	INCHES OF Hg	
BAROMETRIC PRESSURE	30.20	1	3.00	0.025	0.16	MD=	29.080	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.40	0.020	0.14	MG=	17.6	MG TOTAL CATCH
# OF TRAVERSE POINTS	24	3	1.80	0.015	0.12	VWV=	10.739	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	89.6	4	0.59	0.005	0.07	DH=	1.73	INCHES OF H2O- METER BOX
TEMP OF STACK DEG F	809.58	5	0.59	0.005	0.07	TM=	535.38	DEGREES R
INITIAL GAS METER	51.557	6	0.59	0.005	0.07	VM=	39.462	CUBIC FT, METER COND
FINAL GAS METER	91.019	7	1.80	0.015	0.12	VSTPD=	39.314	CUBIC FT, STP & DRY COND
TEMP OF METER	0.997	8	1.80	0.015	0.12	VT=	50.053	CUBIC FT STP CONDITIONS
TEMP OF METER	75	9	1.20	0.010	0.10	W=	0.2145	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.30	10	1.20	0.010	0.10	FDA=	0.7855	DRY GAS FRACTION
SILICA GEL WT. GAIN	10	11	0.71	0.006	0.08	FO=	0	FUEL TYPE
CONDENSATE	218	12	0.71	0.006	0.08	EA=	225.63	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	4.80	0.040	0.20	MS=	26.703	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.75	14	4.80	0.040	0.20	GS=	0.92	REFERRED TO AIR
CO2	3	15	3.60	0.030	0.17	VC=	228	MILLILITERS
CO	15	16	1.80	0.015	0.12	DP=	0.1134	INCHES OF H2O- STACK
NO2	0	17	0.83	0.007	0.08	TS=	1269.58	DEGREES R
NO	82	18	1.40	0.012	0.11	U=	10	FEET PER SECOND
HEFILTER WT. GRAMS	0.0032	19	3.20	0.027	0.16	AS=	43.79	SQUARE FEET
FILTER WEIGHT GRAMS	0.0144	20	1.80	0.015	0.12	QS=	26837	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0176	21	1.20	0.010	0.10	QD=	21079	CUBIC FT/MIN DRY COND
		22	0.59	0.005	0.07	QSTPD=	8851	CUBIC FT/MIN STP & DRY
		23	0.59	0.005	0.07	PM=	30.33	ABS PRESS OF METER, IN Hg
		24	0.59	0.005	0.07	AN=	0.003068	SQUARE FEET
		25	0.00	0.000	0.00	ESTP=	0.0069	GRAINS/DSCF
						PISO=	105.67	% ISOKINETIC
						EM=	0.52	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE DIVISION, JACKSONVILLE, FL - 5 MARCH, 1990

ITR AFTERBURNER START TIME: 1230

METHOD #5 END TIME: 1342

		METER	STACK					
		DH	DP	SQR DP				
5/90								
RUN NUMBER	2				PS=	30.22	INCHES OF Hg	
BAROMETRIC PRESSURE	30.20	1	1.80	0.015	0.12	MD=	29.080	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	1.80	0.015	0.12	MG=	34.7	MG TOTAL CATCH
# OF TRAVERSE POINTS	24	3	0.35	0.003	0.05	VWV=	9.255	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	89.6	4	0.35	0.003	0.05	DH=	1.614	INCHES OF H2O- METER BOX
TEMP OF STACK	800.38	5	0.35	0.003	0.05	TM=	536.29167	DEGREES R
INITIAL GAS METER	91.524	6	0.35	0.003	0.05	VM=	37.736	CUBIC FT, METER COND
FINAL GAS METER	129.26	7	4.70	0.040	0.20	VSTPD=	37.520	CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	4.70	0.040	0.20	VT=	46.775	CUBIC FT STP CONDITIONS
TEMP OF METER	76	9	3.50	0.030	0.17	W=	0.1979	MOISTURE FRACT STACK GAS
STATIC PRESS. IN. H2O	0.30	10	1.80	0.015	0.12	FDA=	0.8021	DRY GAS FRACTION
SILICA GEL WT. GAIN	11.5	11	1.40	0.012	0.11	FO=	0	FUEL TYPE
CONDENSATE	185	12	1.40	0.012	0.11	EA=	225.63	PERCENT EXCESS AIR
TOT CORR. FACTOR	0.84	13	1.80	0.015	0.12	MS=	26.898	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.75	14	1.20	0.010	0.10	GS=	0.93	REFERRED TO AIR
NO2	3	15	1.20	0.010	0.10	VC=	196.5	MILLILITERS
CO	15	16	1.20	0.010	0.10	DP=	0.110	INCHES OF H2O- STACK
CO	0	17	0.94	0.008	0.09	TS=	1260.38	DEGREES R
CO	82	18	0.58	0.005	0.07	U=	10	FEET PER SECOND
FILTER WT. GRAMS	0.0118	19	2.70	0.023	0.15	AS=	43.79	SQUARE FEET
FILTER WEIGHT GRAMS	0.0229	20	2.00	0.017	0.13	QS=	25731	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0347	21	2.00	0.017	0.13	QD=	20640	CUBIC FT/MIN DRY COND
		22	1.20	0.010	0.10	QSTPD=	8730	CUBIC FT/MIN STP & DRY
		23	0.84	0.007	0.08	PM=	30.32	ABS PRESS OF METER, IN Hg
		24	0.58	0.005	0.07	AN=	0.003068	SQUARE FEET
		25	0.00	0.000	0.00	ESTP=	0.0143	GRAINS/DSCF
						PISO=	102.25	% ISOKINETIC
						EM=	1.07	LBS PER HOUR

PARTICULATE CALCULATIONS

MAXWELL HOUSE, JAX FL - 5 MARCH, 1990

ITR AFTERBURNER START TIME: 1400

METHOD #5 END TIME: 1517

		METER STACK					
RUN NUMBER	3	DH	DP	SQR DP	PS=	30.22	INCHES OF Hg
BAROMETRIC PRESSURE	30.20	1	2.30	0.020	0.14	MD= 29.080	LBS/LB-MOLE, DRY
TOTAL TIME	60	2	2.60	0.022	0.15	MG= 20.2	MG TOTAL CATCH
# OF TRAVERSE POINTS	24	3	1.80	0.015	0.12	VWV= 11.021	CUBIC FT, STP CONDITIONS
DIAMETER OF STACK	89.6	4	1.20	0.010	0.10	DH= 1.83	INCHES OF H2O- METER BOX
TEMP OF STACK	809	5	1.20	0.010	0.10	TM= 534.83	DEGREES R
INITIAL GAS METER	29.39	6	1.20	0.010	0.10	VM= 40.977	CUBIC FT, METER COND
FINAL GAS METER	70.367	7	2.30	0.020	0.14	VSTPD= 40.875	CUBIC FT, STP & DRY COND
DIFF OF METER	0.997	8	1.20	0.010	0.10	VT= 51.896	CUBIC FT STP CONDITIONS
TEMP OF METER	75	9	0.71	0.006	0.08	W= 0.2124	MOISTURE FRACT STACK GAS
BAROMETRIC PRESS. IN. H2O	0.30	10	0.71	0.006	0.08	FDA= 0.7876	DRY GAS FRACTION
SYNTHETIC GEL WT. GAIN	11	11	0.71	0.006	0.08	FO= 0	FUEL TYPE
CONDENSATE	223	12	0.70	0.006	0.08	EA= 225.63	PERCENT EXCESS AIR
TOTAL CORR. FACTOR	0.84	13	4.70	0.040	0.20	MS= 26.727	LBS/LB-MOLE, STACK COND
DIAMETER OF NOZZLE	0.75	14	4.70	0.040	0.20	GS= 0.92	REFERRED TO AIR
NOZZLE	3	15	3.50	0.030	0.17	VC= 234	MILLILITERS
NOZZLE	15	16	2.30	0.020	0.14	DP= 0.12	INCHES OF H2O- STACK
NOZZLE	0	17	2.30	0.020	0.14	TS= 1268.63	DEGREES R
NOZZLE	82	18	1.20	0.010	0.10	U= 11	FEET PER SECOND
PRE-FILTER WT. GRAMS	0.0051	19	3.20	0.027	0.16	AS= 43.79	SQUARE FEET
FILTER WEIGHT GRAMS	0.0151	20	1.80	0.015	0.12	QS= 28135	CUBIC FT/MIN STACK COND
TOTAL GRAMS	0.0202	21	1.20	0.010	0.10	QD= 22160	CUBIC FT/MIN DRY COND
		22	0.94	0.008	0.09	QSTPD= 9312	CUBIC FT/MIN STP & DRY
		23	0.94	0.008	0.09	PM= 30.33	ABS PRESS OF METER, IN Hg
		24	0.59	0.005	0.07	AN= 0.003068	SQUARE FEET
		25	0.00	0.000	0.00	ESTP= 0.0076	GRAINS/DSCF
						PISO= 104.43	% ISOKINETIC
						EM= 0.61	LBS PER HOUR

**BEST AVAILABLE COPY
VISIBLE EMISSION TEST**

DATE 2/26/90

PLANT Maxwell House CONTACT Dave Katz

SOURCE ITR After burner ADDRESS JAX, FL

PROCESS DATA _____ PERMIT # _____

TIME, start of test 1112-1212

color of emissions _____

	00	15	30	45		00	15	30	45
0	0	0	0	0	30	0	0	0	0
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
0	0	0	0	0	40	0	0	0	0
1	0	0	0	0	41	0	0	0	0
2	0	0	0	0	42	0	0	0	0
3	0	0	0	0	43	0	0	0	0
4	0	0	0	0	44	0	0	0	0
5	0	0	0	0	45	0	0	0	0
6	0	0	0	0	46	0	0	0	0
7	0	0	0	0	47	0	0	0	0
8	0	0	0	0	48	0	0	0	0
9	0	0	0	0	49	0	0	0	0
0	0	0	0	0	50	0	0	0	0
1	0	0	0	0	51	0	0	0	0
2	0	0	0	0	52	0	0	0	0
3	0	0	0	0	53	0	0	0	0
4	0	0	0	0	54	0	0	0	0
5	0	0	0	0	55	0	0	0	0
6	0	0	0	0	56	0	0	0	0
7	0	0	0	0	57	0	0	0	0
8	0	0	0	0	58	0	0	0	0
9	0	0	0	0	59	0	0	0	0

distance to emission point 100 YDS

direction to emission point NW

emissions: continuous - intermittent fugitive

water vapor present: yes no

if so, is plume attached: yes no

color of background Blue

sky conditions clear % clouds _____

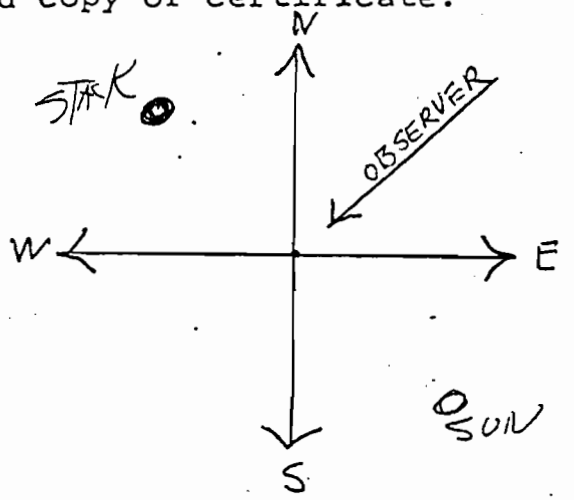
wind speed 20 MPH direction N

ambient temperature 56° rel. humidity _____

comments _____

Observer's certification # _____
or attached copy of certificate.

sketch:



Total of all observation values: 0
Total # of observations: 240
AVERAGE OPACITY: 0%
OBSERVER'S SIGNATURE: [Signature]

**BEST AVAILABLE COPY
VISIBLE EMISSION TEST**

DATE 2/26/90

PLANT Marvell House CONTACT Dave Katz
SOURCE Cooler Exhaust ADDRESS JAX, FLA

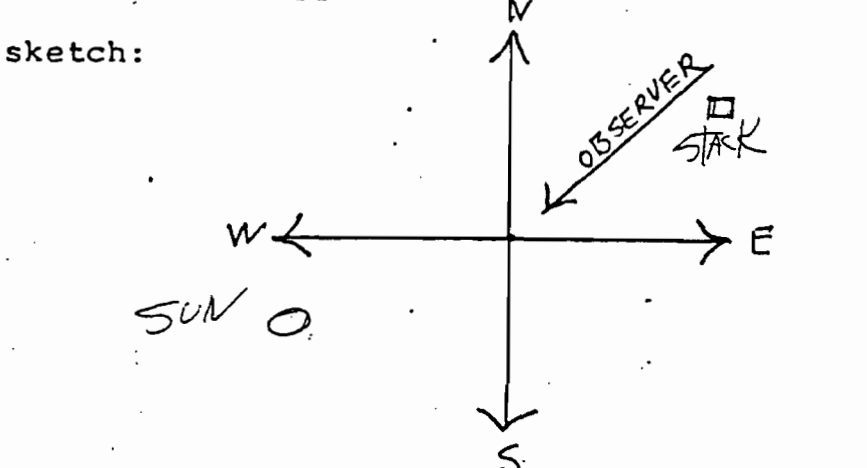
PROCESS DATA _____ PERMIT # _____

TIME, start of test 1610-1710

	00	15	30	45		00	15	30	45
10	0	0	5	0	30	0	0	0	0
11	0	0	0	0	31	0	0	5	0
12	0	0	0	5	32	0	0	0	0
13	5	0	0	0	33	5	0	0	0
14	0	0	0	0	34	0	0	5	0
15	0	0	0	0	35	0	0	0	0
16	0	0	0	0	36	0	5	0	0
17	0	5	0	5	37	0	0	0	5
18	0	0	0	0	38	0	0	0	0
19	0	0	0	0	39	0	0	0	5
20	0	0	0	0	40	0	0	0	0
21	0	0	0	0	41	0	0	5	0
22	0	0	0	0	42	0	0	0	0
23	0	0	0	0	43	0	5	0	0
24	5	0	0	0	44	0	0	0	0
25	0	0	0	0	45	0	0	0	0
26	0	5	0	0	46	0	5	0	0
27	0	0	0	5	47	0	0	0	0
28	0	0	0	0	48	5	0	5	0
29	0	0	5	0	49	0	0	0	0
30	0	0	0	0	50	0	0	5	0
31	0	0	0	0	51	0	0	0	5
32	0	0	0	0	52	0	0	0	0
33	0	0	0	0	53	0	0	0	0
34	0	0	0	0	54	0	0	0	0
35	5	0	0	0	55	0	0	0	0
36	0	0	0	5	56	0	0	5	0
37	0	0	0	0	57	0	0	0	0
38	0	0	0	0	58	0	0	5	0
39	0	0	0	0	59	5	0	0	0

color of emissions WHITE
 distance to emission point 40 FT
 direction to emission point NE
 emissions: continuous intermittent fugitive
 water vapor present: yes no
 if so, is plume attached: yes no
 color of background BROWN
 sky conditions Mostly clear 20% cloud:
 wind speed 15 mph direction N
 ambient temperature 58° rel. humidity _____
 comments _____

* 1% opacity
Highest 6 M.V. AV.
 Observer's certification # _____
 or attached copy of certificate.



Total of all observation values: _____
 Total # of observations: _____
 AVERAGE OPACITY: 1%*
 OBSERVER'S SIGNATURE: Darren Newton

BEST AVAILABLE COPY
VISIBLE EMISSION TEST

DATE 2-27-90

PLANT Manwell House CONTACT Dave Katz
SOURCE Product To BAR SYSTEM ADDRESS JAX, FL

PROCESS DATA _____ PERMIT # _____

TIME, start of test 1250-1350

color of emissions _____

	00	15	30	45		00	15	30	45
00	0	0	0	0	30	0	0	0	0
01	0	0	0	0	31	0	0	0	0
02	0	0	0	0	32	0	0	0	0
03	0	0	0	0	33	0	0	0	0
04	0	0	0	0	34	0	0	0	0
05	0	0	0	0	35	0	0	0	0
06	0	0	0	0	36	0	0	0	0
07	0	0	0	0	37	0	0	0	0
08	0	0	0	0	38	0	0	0	0
09	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0

distance to emission point 40 FT

direction to emission point NE

emissions: continuous intermittent fugitive

water vapor present: yes no

if so, is plume attached: yes no

color of background BROWN

sky conditions CLEAR & clouds: _____

wind speed 15 MPH direction N

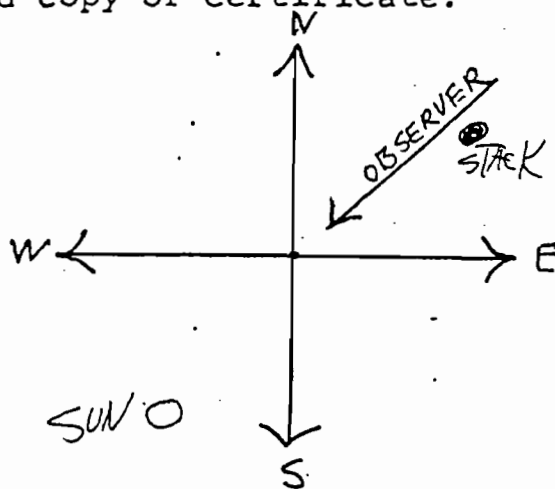
ambient temperature 55° rel. humidity _____

comments _____

Observer's certification # _____

or attached copy of certificate.

sketch:



Total of all observation values: 0

Total # of observations: 240

AVERAGE OPACITY: 0%

OBSERVER'S SIGNATURE: Dave Katz

**BEST AVAILABLE COPY
VISIBLE EMISSION TEST**

DATE 2/23/90

PLANT Maxwell House CONTACT Dave Katz

SOURCE Green Bean Feed ADDRESS Jax, Fla.

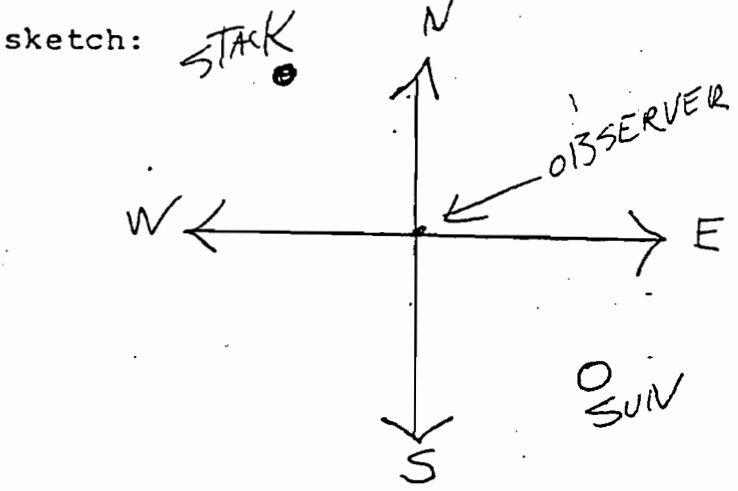
PROCESS DATA run #1 PERMIT # _____

TIME, start of test 0947-1047

	00	15	30	45		00	15	30	45
10	0	0	0	0	30	0	0	0	0
11	0	0	0	0	31	0	0	0	0
12	0	0	0	0	32	0	0	0	0
13	0	0	0	0	33	0	0	0	0
14	0	0	0	0	34	0	0	0	0
15	0	0	0	0	35	0	0	0	0
16	0	0	0	0	36	0	0	0	0
17	0	0	0	0	37	0	0	0	0
18	0	0	0	0	38	0	0	0	0
19	0	0	0	0	39	0	0	0	0
20	0	0	0	0	40	0	0	0	0
21	0	0	0	0	41	0	0	0	0
22	0	0	0	0	42	0	0	0	0
23	0	0	0	0	43	0	0	0	0
24	0	0	0	0	44	0	0	0	0
25	0	0	0	0	45	0	0	0	0
26	0	0	0	0	46	0	0	0	0
27	0	0	0	0	47	0	0	0	0
28	0	0	0	0	48	0	0	0	0
29	0	0	0	0	49	0	0	0	0
30	0	0	0	0	50	0	0	0	0
31	0	0	0	0	51	0	0	0	0
32	0	0	0	0	52	0	0	0	0
33	0	0	0	0	53	0	0	0	0
34	0	0	0	0	54	0	0	0	0
35	0	0	0	0	55	0	0	0	0
36	0	0	0	0	56	0	0	0	0
37	0	0	0	0	57	0	0	0	0
38	0	0	0	0	58	0	0	0	0
39	0	0	0	0	59	0	0	0	0

color of emissions —
 distance to emission point 30 FT
 direction to emission point NW
 emissions: continuous - intermittent fugitive
 water vapor present: yes (no)
 if so, is plume attached: yes no
 color of background BROWN
 sky conditions CLEAR & clouds:
 wind speed 10 MPIT direction NE
 ambient temperature 70° rel. humidity
 comments _____

Observer's certification # _____
 or attached copy of certificate.



Total of all observation values: 0
 Total # of observations: 240
 AVERAGE OPACITY: 0%

OBSERVER'S SIGNATURE: Danew Newton

**BEST AVAILABLE COPY
VISIBLE EMISSION TEST**

DATE 3/1/90

PLANT Nasswell House CONTACT Dave Katz
 SOURCE Pollutant from Stoves ADDRESS JAX, FLA.

PROCESS DATA _____ PERMIT # _____

TIME, start of test 1015-1115

color of emissions _____

	00	15	30	45		00	15	30	45
10	0	0	0	0	30	0	0	0	0
11	0	0	0	0	31	0	0	0	0
12	0	0	0	0	32	0	0	0	0
13	0	0	0	0	33	0	0	0	0
14	0	0	0	0	34	0	0	0	0
15	0	0	0	0	35	0	0	0	0
16	0	0	0	0	36	0	0	0	0
17	0	0	0	0	37	0	0	0	0
18	0	0	0	0	38	0	0	0	0
19	0	0	0	0	39	0	0	0	0
20	0	0	0	0	40	0	0	0	0
21	0	0	0	0	41	0	0	0	0
22	0	0	0	0	42	0	0	0	0
23	0	0	0	0	43	0	0	0	0
24	0	0	0	0	44	0	0	0	0
25	0	0	0	0	45	0	0	0	0
26	0	0	0	0	46	0	0	0	0
27	0	0	0	0	47	0	0	0	0
28	0	0	0	0	48	0	0	0	0
29	0	0	0	0	49	0	0	0	0
30	0	0	0	0	50	0	0	0	0
31	0	0	0	0	51	0	0	0	0
32	0	0	0	0	52	0	0	0	0
33	0	0	0	0	53	0	0	0	0
34	0	0	0	0	54	0	0	0	0
35	0	0	0	0	55	0	0	0	0
36	0	0	0	0	56	0	0	0	0
37	0	0	0	0	57	0	0	0	0
38	0	0	0	0	58	0	0	0	0
39	0	0	0	0	59	0	0	0	0

distance to emission point 100 YDS

direction to emission point NW

emissions: continuous - intermittent fugitive

water vapor present: yes no

if so, is plume attached: yes no

color of background BROWN

sky conditions partly cloudy 10% clouds

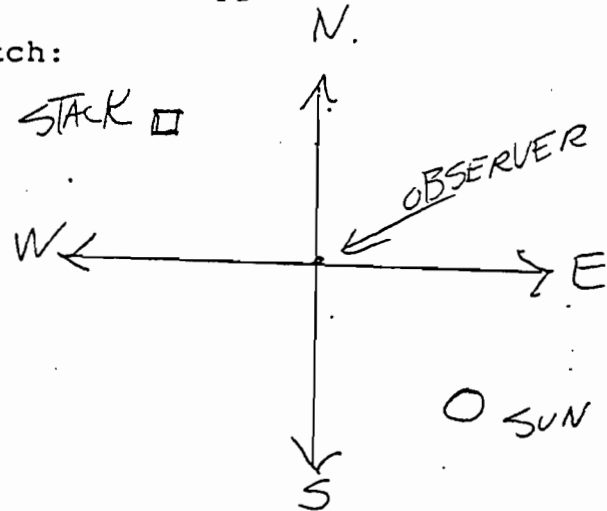
wind speed 10 MPH direction NE

ambient temperature 70° rel. humidity _____

comments from ground level

Observer's certification # _____
 or attached copy of certificate.

sketch:



Total of all observation values: 0

Total # of observations: 240

AVERAGE OPACITY: 0%

OBSERVER'S SIGNATURE: Darwin Newson

BEST AVAILABLE COPY
VISIBLE EMISSION TEST

DATE 3/1/90

PLANT Mastell House
SOURCE Stones Product

CONTACT Dave Katz
ADDRESS JAX, Fla

PROCESS DATA _____ PERMIT # _____

TIME, start of test 1400-1500

color of emissions _____

distance to emission point 20 FT

direction to emission point NE

emissions: continuous - intermittent fugi

water vapor present: yes (no)

if so, is plume attached: yes no

color of background BROWN

sky conditions partly cldy 20% cloud

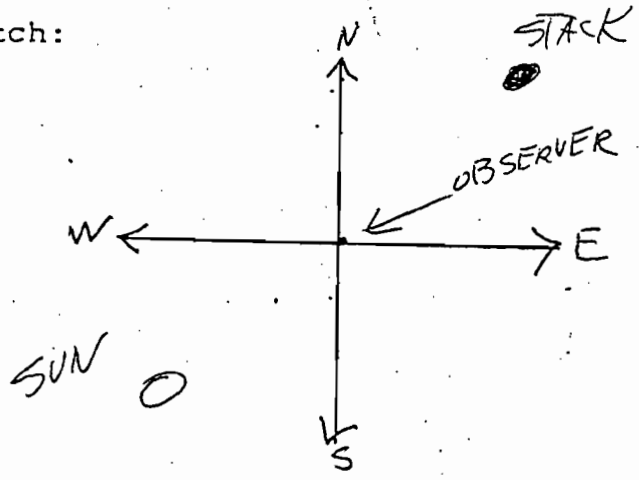
wind speed 10 mph direction NE

ambient temperature 60 rel. humidity _____

comments _____

Observer's certification # _____
or attached copy of certificate.

sketch:



Total of all observation values: 0
Total # of observations: 240
AVERAGE OPACITY: 0%

OBSERVER'S SIGNATURE: Ronald Brown

	00	15	30	45		00	15	30	45
00	0	0	0	0	30	0	0	0	0
01	0	0	0	0	31	0	0	0	0
02	0	0	0	0	32	0	0	0	0
03	0	0	0	0	33	0	0	0	0
04	0	0	0	0	34	0	0	0	0
05	0	0	0	0	35	0	0	0	0
06	0	0	0	0	36	0	0	0	0
07	0	0	0	0	37	0	0	0	0
08	0	0	0	0	38	0	0	0	0
09	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0

BEST AVAILABLE COPY
VISIBLE EMISSION TEST

DATE 3/2/90

PLANT Marvell House CONTACT Dave Katz
SOURCE Product Bunker B/H ADDRESS JAX, FLA

PROCESS DATA _____ PERMIT # _____

TIME, start of test 1315-1415

color of emissions _____

distance to emission point 50 FT

direction to emission point NE

emissions: continuous - intermittent fug

water vapor present: yes no

if so, is plume attached: yes no

color of background Partly cloudy SKY

sky conditions cloudy 50% cloud

wind speed 10 MPH direction S

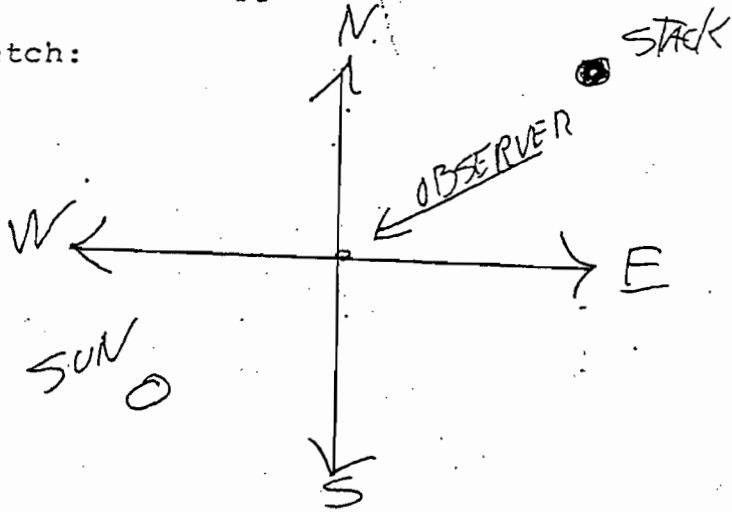
ambient temperature 70° rel. humidity _____

comments _____

Observer's certification # _____

or attached copy of certificate.

sketch:



Total of all observation values: 0

Total # of observations: 240

AVERAGE OPACITY: 0%

OBSERVER'S SIGNATURE: Darren Newson

	00	15	30	45		00	15	30	45
0	0	0	0	0	30	0	0	0	0
1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0
0	0	0	0	0	40	0	0	0	0
1	0	0	0	0	41	0	0	0	0
2	0	0	0	0	42	0	0	0	0
3	0	0	0	0	43	0	0	0	0
4	0	0	0	0	44	0	0	0	0
5	0	0	0	0	45	0	0	0	0
6	0	0	0	0	46	0	0	0	0
7	0	0	0	0	47	0	0	0	0
8	0	0	0	0	48	0	0	0	0
9	0	0	0	0	49	0	0	0	0
0	0	0	0	0	50	0	0	0	0
1	0	0	0	0	51	0	0	0	0
2	0	0	0	0	52	0	0	0	0
3	0	0	0	0	53	0	0	0	0
4	0	0	0	0	54	0	0	0	0
5	0	0	0	0	55	0	0	0	0
6	0	0	0	0	56	0	0	0	0
7	0	0	0	0	57	0	0	0	0
8	0	0	0	0	58	0	0	0	0
9	0	0	0	0	59	0	0	0	0

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME			OBSERVATION DATE				START TIME		STOP TIME	
Maxwell House Coffee			3-5-90				11:00 AM		12:00 PM	
ADDRESS			SEC		MIN		SEC		MIN	
735 E. Bay St.			0	15	30	45	0	15	30	45
CITY			STATE		ZIP		1		2	
Jacksonville			FL		32202		0 0 0 0		0 0 0 0	
PHONE			SOURCE ID NUMBER		3		4		5	
366-3400							0 0 0 0		0 0 0 0	
PROCESS EQUIPMENT			OPERATING MODE		6		7		8	
LTR							0 0 0 0		0 0 0 0	
CONTROL EQUIPMENT			OPERATING MODE		9		10		11	
Afterburner			ON				0 0 0 0		0 0 0 0	
DESCRIBE EMISSION POINT			START		STOP		12		13	
48" Dia Stack			90'		90'		0 0 0 0		0 0 0 0	
HEIGHT ABOVE GROUND LEVEL			HEIGHT RELATIVE TO OBSERVER		14		15		16	
90'			90'				0 0 0 0		0 0 0 0	
DISTANCE FROM OBSERVER			DIRECTION FROM OBSERVER		17		18		19	
120'			NW				0 0 0 0		0 0 0 0	
DESCRIBE EMISSIONS			START		STOP		20		21	
Products of Combustion			Clear		Clear		0 0 0 0		0 0 0 0	
EMISSION COLOR			PLUME TYPE: CONTINUOUS <input checked="" type="checkbox"/>		FUGITIVE <input type="checkbox"/> INTERMITTENT <input type="checkbox"/>		22		23	
Clear							0 0 0 0		0 0 0 0	
WATER DROPLETS PRESENT: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>			IF WATER DROPLET PLUME: ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>		24		25		26	
							0 0 0 0		0 0 0 0	
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED			START		STOP		27		28	
2' above stack							0 0 0 0		0 0 0 0	
DESCRIBE BACKGROUND			START		STOP		29		30	
Sky			Blue		Clear		0 0 0 0		0 0 0 0	
BACKGROUND COLOR			SKY CONDITIONS		21		22		23	
Blue			Clear				0 0 0 0		0 0 0 0	
WIND SPEED			WIND DIRECTION		24		25		26	
10-15 mph			N				0 0 0 0		0 0 0 0	
AMBIENT TEMP.			WET BULB TEMP.		RH, percent		27		28	
70					60%		0 0 0 0		0 0 0 0	
SOURCE LAYOUT SKETCH			DRAW NORTH ARROW		29		30		31	
<p>The sketch shows an emission point at the top, connected by a vertical line to the observers' position at the bottom. A dashed horizontal line represents the sun location line, with a 140-degree angle marked between it and the vertical line. A north arrow is drawn in a circle to the right. Symbols for sun (a diamond) and wind (an arrow) are shown to the left of the observers' position.</p>			<p>AVERAGE OPACITY FOR HIGHEST PERIOD: 0</p> <p>RANGE OF OPACITY READINGS: 0 MINIMUM 0 MAXIMUM</p> <p>NUMBER OF READINGS ABOVE HIGHEST PERIOD: 0 % WERE 0</p>		32		33		34	
<p>SUN <input checked="" type="checkbox"/> WIND <input checked="" type="checkbox"/></p> <p>PLUME AND STACK <input checked="" type="checkbox"/></p>							0 0 0 0		0 0 0 0	
COMMENTS			OBSERVER'S NAME (PRINT)		OBSERVER'S SIGNATURE		DATE		35	
VE observed simultaneous with stack sampling			C. LEE DANIEL, JR		[Signature]		3-5-90		36	
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATIONS			ORGANIZATION		CERTIFIED BY		DATE		37	
			self		State of Florida		12-6-89		38	
SIGNATURE			DATE		VERIFIED BY		DATE		39	
									40	

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO CERTIFY THAT

DARREN NEWSOM has completed the
STATE OF FLORIDA visible emissions evaluation training and is a qualified
observer of visible emissions as specified by EPA reference method 9.
THIS CERTIFICATE EXPIRES Jun 6, 1990

Michael R. Clark CERTIFICATE OFFICER
Darren Newsom BEARER'S SIGNATURE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

THIS IS TO CERTIFY THAT

C. LEE DANIEL JR. has completed the
STATE OF FLORIDA visible emissions evaluation training and is a qualified
observer of visible emissions as specified by EPA reference method 9.
THIS CERTIFICATE EXPIRES Jun 6, 1990

Michael R. Clark CERTIFICATE OFFICER
C. Lee Daniel Jr. BEARER'S SIGNATURE

APPENDIX B
FIELD DATA SHEETS

FIELD DATA SHEET

AFTER BURNER

PLANT Maxwell House UNIT TESTED ITR DATE 2/26/90 RUN NUMBER 1

OPERATOR McKee & Thomas AMBIENT Temperature 60 Barometric Pressure 30.52

Stack Diameter 49.6" Probe Length 7' Probe Heater Setting 250 Nozzle Cal. .750, .750, .751

Assumed Moisture 15% Number of Points 24 Heater Box Setting 250 Nozzle diameter .750

START TIME 0940 Filter Number R1 Pitot Corr. Factor .84 Meter Box Number 1

END TIME 1053 Final Gas Meter Reading 130.056 ft³
Initial Gas Meter Reading 46.397 ft³

Condensate Increase 198 ml Net 43.659 ft³
Silica Gel Increase 10.5 gm

Fraction Dry Air .85

Leak Checks: Meter Box DH # 2.05

VACUUM LINE Pre/Post .05 @ 7"
Pitot Tube "4" 0.0 @ 4"
Orsat Line

60 MIN

75

TRAVERSE POINT NUMBER	SAMPLING TIME (θ), min.	STATIC PRESSURE in. of H ₂ O	STACK TEMPERATURE (T _s), F	Velocity Head		Pressure Differential Across Orifice Meter (DH) in. of H ₂ O	GAS VOLUME SAMPLED (V _m) ft ³	GAS METER TEMPERATURE		SAMPLE BOX TEMPERATURE	TEMPERATURE OF LAST IMPINGER	PUMP VACUUM in. of Hg	ORSAT: % CO ₂
				(Dp _s)	(√Dp _s)			Inlet	Outlet				
1-1	2.5	+30	1005	.025		2.8	88.5	60		250	50	3	
2	5		999	.020		2.2	90.4	61		250	50	3	
3	7.5		972	.005		.56	91.4	61		250	50	2	
4	10		953	.005		.56	92.3	61		250	50	2	
5	12.5		973	.005		.56	93.3	61		250	50	2	
6	15		977	.005		.56	94.3	62		250	50	2	
2-1	2.5		1012	.035		3.8	96.7	65		230	48	4	
2	5		1005	.030		3.3	99.1	65		250	48	4	
3	7.5		1000	.025		2.7	1.2	66		255	48	4	
4	10		994	.022		2.4	3.2	66		250	48	3	
5	12.5		985	.015		1.6	5.0	67		250	48	3	
6	15		985	.012		1.3	6.4	67					
3-1	2.5		1030	.040		4.4	9.0	68		250	48	5	

PLANT/UNIT TESTED

ITR

DATE 2/26/90 RUN # 1

TRAVERSE POINT	SAMPLING TIME (θ)	STATIC PRESSURE	STACK TEMPERATURE (Ts), F	109 VELOCITY HEAD		PRESSURE ACROSS ORIFICE AFTER METER		GAS VOLUME SAMPLED (Vm) ft ³	GAS METER TEMPERATURE °F		SAMPLE BOX TEMPERATURE	TEMPERATURE OF LAST IMPINGER	PUMP VACUUM IN. of Hg
				(Dp _g)	(NDp _g)	ACTUAL (Dh)	DESIRED (Dh)		INLET	OUTLET			
3-2	5	+30	1051	.040		4.4		-	68		250	45	5
3	7.5		1000	.030		3.3		14.3	69		250	45	4
4	10		949	.015		1.6		16.0	70		250	45	4
5	12.5		940	.015		1.6		17.7	70		250	45	3
6	15		980	.015		1.6		19.4	70		250	45	3
4-1	2.5		1013	.030		3.3		21.8	70		250	45	4
2	5		1018	.030		3.5		24.1	71		250	45	4
3	7.5		1009	.020		2.2		26.3	71		250	45	4
4	10		1000	.010		1.1		27.4	71		250	45	3
5	12.5		976	.010		1.1		29.1	70		250	45	3
6	15		972	.005		.55		30.056	70		250	45	3
995 1455.2				.1327		DH 2.12		TM 66.7 526.7					

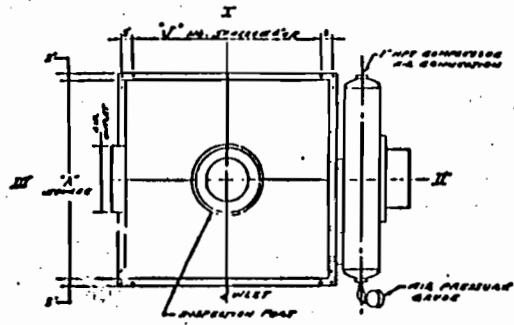
55

ATTACHMENT 11-A

VENDOR DATA
EMISSION POINT NO. D2

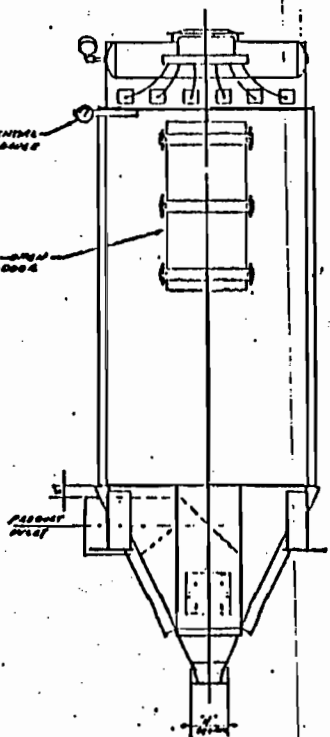
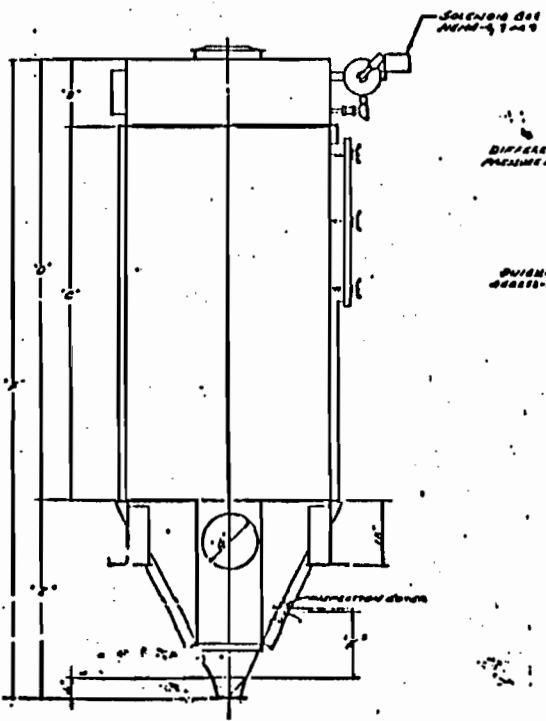
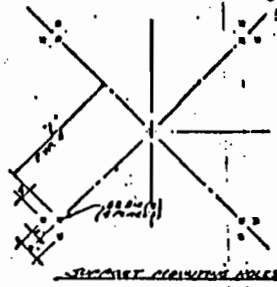
BAGHOUSE

BEST AVAILABLE COPY



DEAL NO.
510-671
510-694

DIMENSIONS (IN INCHES)												
MODEL NO.	A	B	C	D	E	F	G	H	I	J	K	L
24DC-340	20	20	21	22	22.5	24.5	0	0	2	-	12.5	12.5
24DC-360	20	20	20.5	21.5	22.5	24.5	0	0	2	-	12.5	12.5



- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES.
 2. DRAWING TO BE USED FOR DESIGN, MANUFACTURING AND
 3. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
 4. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
 5. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
 6. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
 7. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
 8. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.
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 10. DIMENSIONS TO BE MAINTAINED UNLESS OTHERWISE SPECIFIED.

REF: 7510-71
7510-72

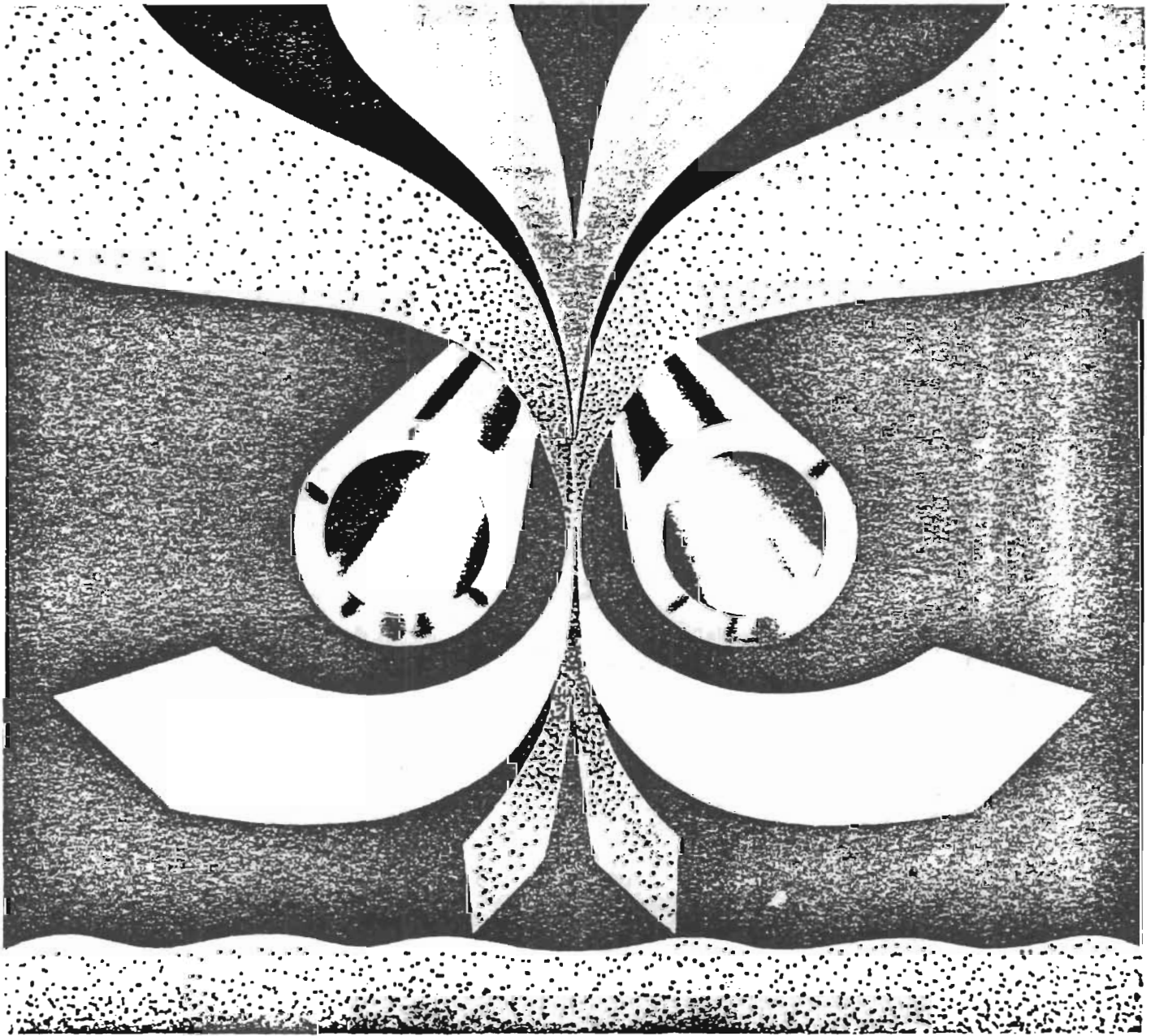
DUHLER-MAID, INC. MINNEAPOLIS, MINNESOTA	REV. 40091
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ATTACHMENT 11-B

VENDOR DATA
EMISSION POINT NO. D3

VENTURI SCRUBBER

A33 VENTRI-ROD SCRUBBER



INDUSTRY'S MOST VERSATILE WET SCRUBBING CONCEPT.

OUCON

engineering Inc.

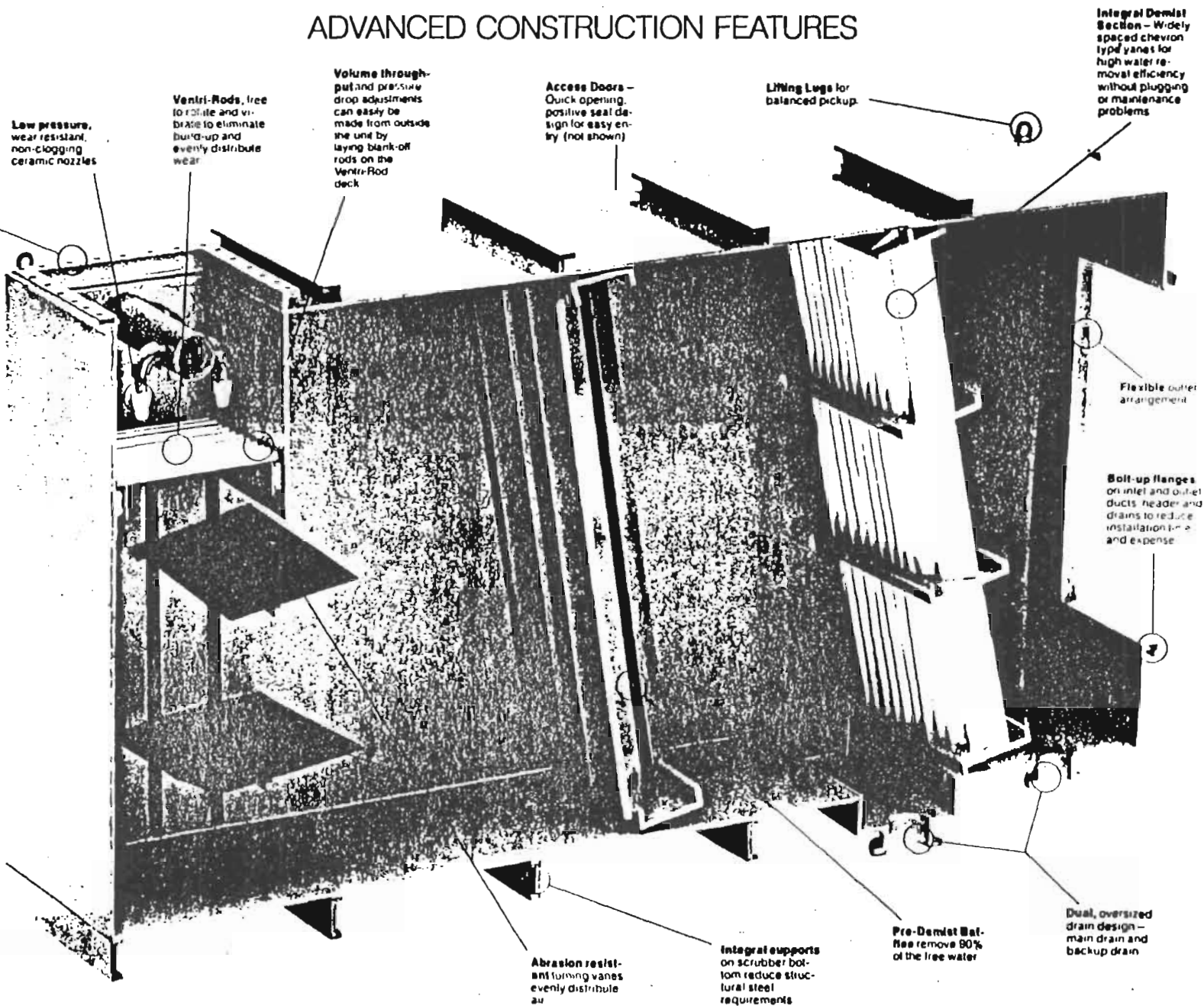
BEST AVAILABLE COPY

ADVANCED CONSTRUCTION FEATURES

HOW THE SCRUBBER WORKS

Particulate laden gas is directed through the Ventri-Rod stage where parallel pipes create a series of longitudinal narrow broad venturi openings. Scrub water is introduced co-currently with the gas stream through a series of low pressure large orifice spray nozzles. These nozzles regulate and evenly distribute the scrub water over the entire area of the Ventri-Rod bed. As the gas flows between the Ventri-Rods, a violent acceleration takes place and gas picks up moisture from the scrub water by entrainment and venturi action. High velocity in the Ventri-Rod area creates turbulent flow which literally tears the liquid droplets into smaller ones, causing a better blending of the contaminant particles and an increased collection efficiency for sub-micron particles. Particulate matter in the gas comes into close and repeated direct contact with the finely divided droplets of scrub water. Particulate is agglomerated and entrained within the scrub water.

As the scrubbed gases exit the Ventri-Rod area, deceleration takes place, releasing the larger particulate laden water droplets onto the floor of the scrubber as the scrubbed gases are directed toward the demisting zone by baffles or turning vanes. Moisture removal takes place in the pre-demist area, which removes 90% of the free water droplets and evenly distributes the gas stream to the demisting vane surfaces where the remaining free water is removed, and dry, clean gases are then exhausted via the scrubber outlet. The water collected prior to the demist section flows down the scrubber floor to the drain trough, carrying entrapped particulate to waste.



Low pressure, wear resistant, non-clogging ceramic nozzles

Ventri-Rods, free to rotate and vibrate to eliminate build-up and evenly distribute wear

Volume throughput and pressure drop adjustments can easily be made from outside the unit by laying blank-off rods on the Ventri-Rod deck

Access Door - Quick opening, positive seal design for easy entry (not shown)

Lifting Legs for balanced pickup

Integral Demist Section - Widely spaced chevron type vanes for high water removal efficiency without plugging or maintenance problems

Flexible outlet arrangement

Bolt-up flanges on inlet and outlet ducts, header and drains to reduce installation time and expense

Dual, oversized drain design - main drain and backup drain

Pre-Demist Baffle remove 90% of the free water

Integral supports on scrubber bottom reduce structural steel requirements

Abrasion resistant turning vanes evenly distribute air

DESIGN FEATURES

FLEXIBLE DESIGN

The A-33 Ventri-Rod Scrubber works in up-flow, down-flow or horizontal-flow configurations, providing maximum flexibility to locate inlet and outlet connections to suit particular installation conditions. This design flexibility makes it possible to install the A-33 almost anywhere.

LOW MAINTENANCE

The A-33 Ventri-Rod Scrubber has an unsurpassed record of low maintenance due to a number of design features:

- Low pressure, wear resistant, non-clogging ceramic spray nozzles.
- Ventri-Rods, free to rotate and vibrate, minimize build-up and evenly distribute wear. The wear zone is limited to the easily replaceable pipes.
- Widely spaced chevron type demist vanes eliminate build-up and plugging.
- Oversized drains to eliminate plugging.
- Quick opening doors provide easy access to all areas of the scrubber.

COMPACT DESIGN

A-33 Ventri-Rod Scrubbers up to 90,000 ACFM can be shipped and installed in one piece. Larger units up to 600,000 ACFM can be shipped in as few as four pieces for field assembly. Integral demisting saves space and eliminates the need for external demisting units.

WIDE PERFORMANCE RANGE

Enviroengineering's Ventri-Rod principle makes it possible for one basic scrubber design to handle inlet loadings in excess of 20 grains and to operate efficiently with pressure drops from 2" to 150" W.G. over a range of liquid-to-gas ratios from 2 to 15 gallons per 1000 CFM.

LOW INSTALLATION COST

The design of the A-33 Ventri-Rod Scrubber makes it easier to handle and install. Flanged inlets and outlets simplify duct and piping hookups and integral structural supports reduce customer's steel requirements. The scrubber's compact size minimizes the requirement for access platforms.

PROVEN PERFORMANCE FROM ONE DESIGN

Hundreds of A-33 Ventri-Rod Scrubber installations, ranging in volume from 1000 to 600,000 ACFM, handling everything from iron oxide dust to fly ash, have proven the performance of this exceptional scrubber design. No other scrubber offers so much installation flexibility and operating performance.

UPGRADE TO TOMORROW'S CODE

Upgrading the A-33 Ventri-Rod Scrubber to meet changing emissions standards is a simple matter of reducing the open area of the Ventri-Rod deck by laying in blank-off rods. The additional rods increase the unit's pressure drop, resulting in lower outlet loadings.

ECONOMY IN FABRICATION MATERIALS

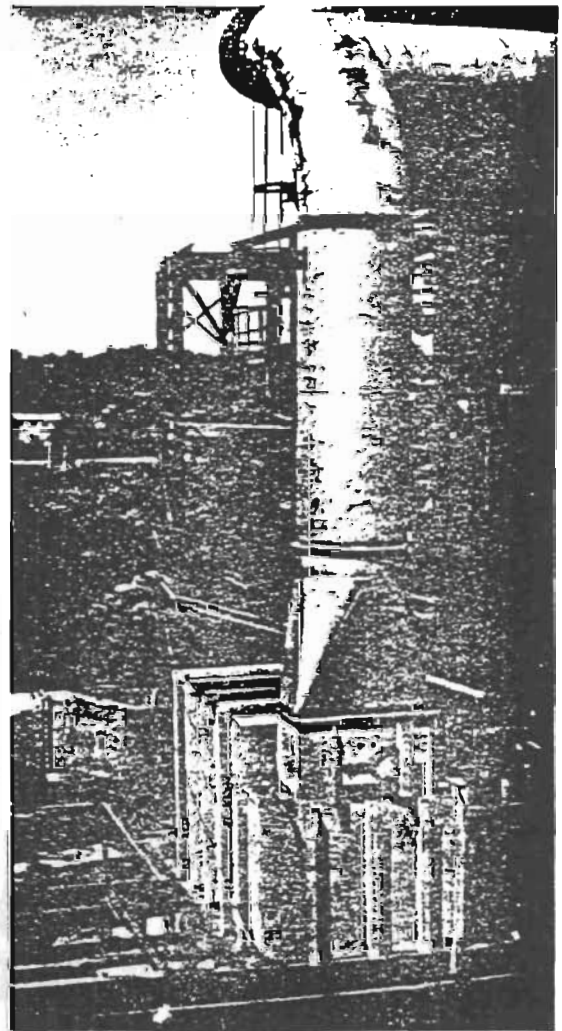
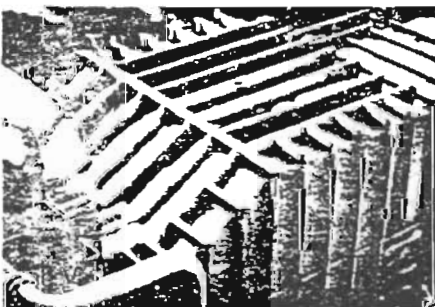
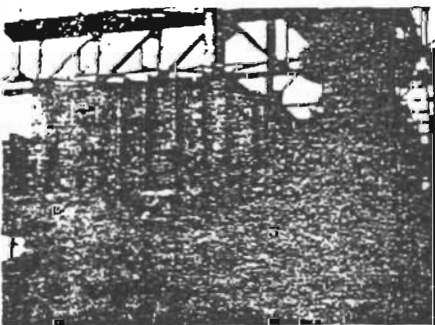
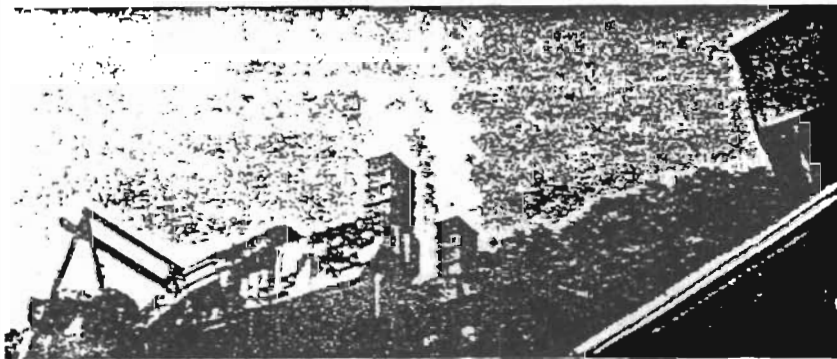
The A-33 Ventri-Rod Scrubber is well suited for fabrication from a wide variety of materials that can be combined to most economically meet the requirements of any process.

In non-severe service, such as a foundry sand system, the entire scrubber is fabricated of mild steel except for the rods and demist vanes which are stainless steel.

In high temperature service, such as a cupola control system, the inlet is made from stainless steel as are the demist vanes. The rest of the scrubber is fabricated of mild steel.

In severely corrosive service such as a coal fired boiler emission system, the inlet is made of corrosion and erosion resistant high moly, high nickel alloys. Downstream of the rod bed, corrosion can be effectively controlled by the use of mild steel coated with glass-filled polyester. Pre-demist and demist vanes are plastic for long life. This combination of materials will withstand the most severe service at a cost far less than fabrication of the entire scrubber with exotic alloys.

INDUSTRIAL APPLICATIONS

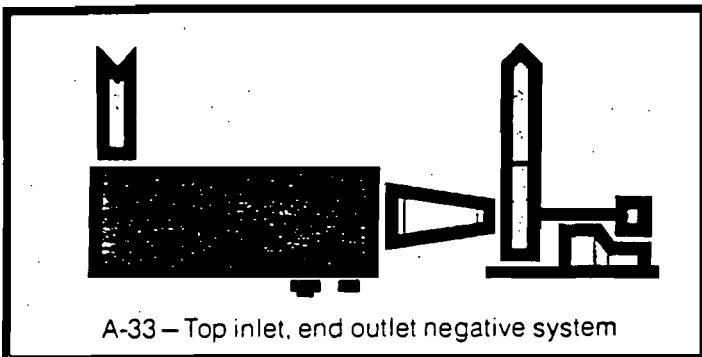


Antimony oxide kilns
Ammonium sulphate dryers
Bagasse boilers
Coal fired boilers
Chicken feather dryers
Taconite pelletizing machines

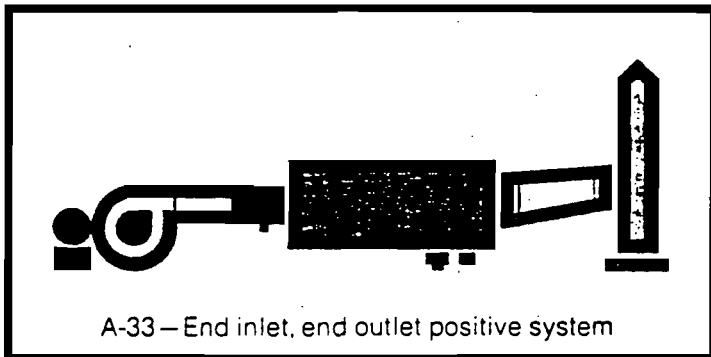
Mineral processing
Thermal coal dryers
Liquid incinerators
Refuse incinerators
Sand dryers
Foundry sand systems
Carbon black furnaces

Cupolas
Grain dryers
Phosphate dryers
Talcum powder processing
Vermiculite dryers
Sintering plants
Aggregate dryers

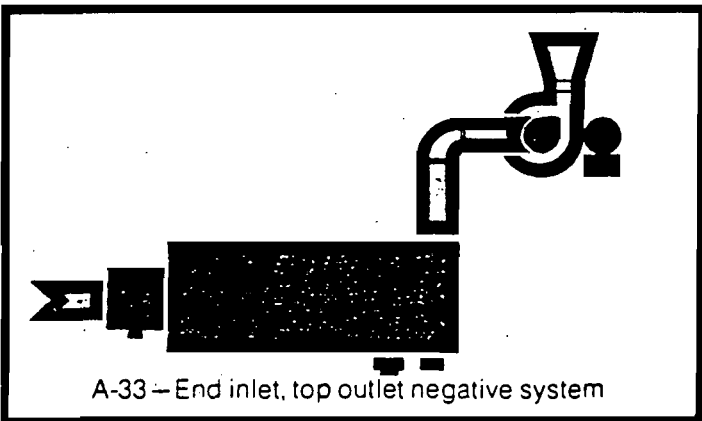
TYPICAL ARRANGEMENTS



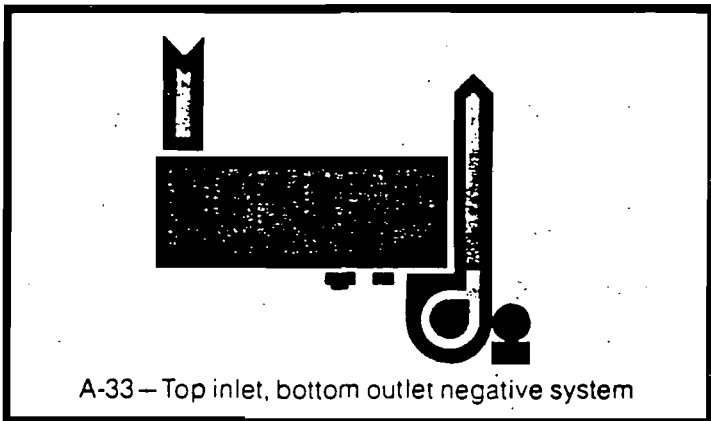
A-33 – Top inlet, end outlet negative system



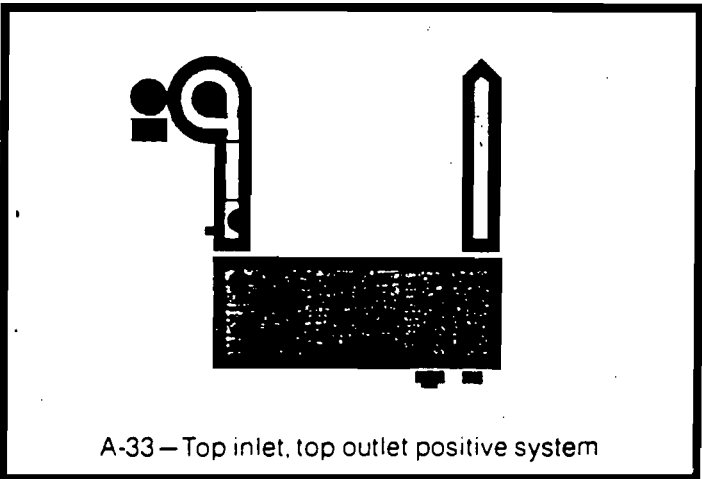
A-33 – End inlet, end outlet positive system



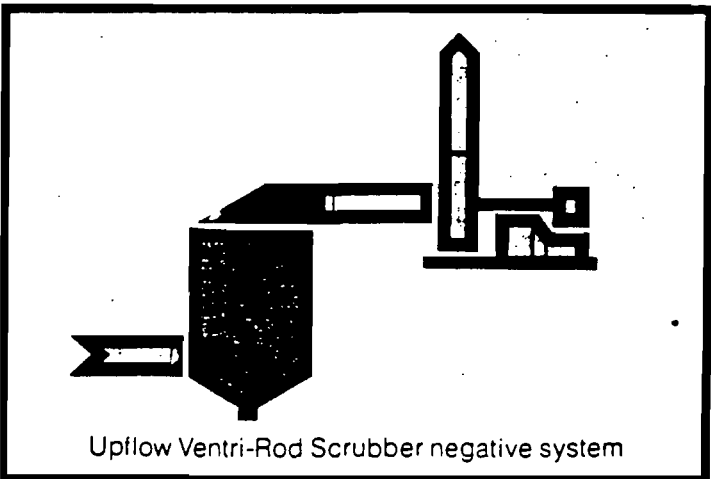
A-33 – End inlet, top outlet negative system



A-33 – Top inlet, bottom outlet negative system



A-33 – Top inlet, top outlet positive system



Upflow Ventri-Rod Scrubber negative system

ATTACHMENT 11-C

VENDOR DATA
EMISSION POINT NO. D3

ROSS-WALDRON AFTERBURNER

ROSS-WALDRON

ROSS-WALDRON

ROSS-WALDRON

ROSS-WALDRON

CUSTOM ENGINEERED SYSTEMS

ROSS-WALDRON

ROSS-WALDRON



PROPOSAL NO. IN6011025-1

For

GENERAL FOODS CORPORATION

ONE (1) 10,000 SCFM AFTERBURNER

APRIL 18, 1986



SOMERSET TECHNOLOGIES, INC.

DIRECT FIRED AFTERBURNER
ROSS PROPOSAL NO. SD6011069-OPTION NO. 1

MAXWELL HOUSE (HOUSTON)
FEBRUARY 6, 1987

DIRECT FIRED AFTERBURNER ENERGY CALCULATIONS

Contaminant Rate:	91.7 #/Hr.
Exhaust volume:	10,000 SCFM
Thermal energy recovery:	0 %
Afterburner temperature:	1500 Deg. F
Afterburner exhaust temperature with contaminants:	1500 Deg. F
Afterburner exhaust temperature with no contaminants:	1500 Deg. F
Process exhaust temperature (1):	118°F Saturated
Temperature increase, with no contaminants:	1382 Deg. F
Energy required:	18,042,600 Btu/Hr.
Net energy available from contaminants (gross less 10% latent heat loss):	*(495,180 Btu/Hr.)
Net fuel energy required:	18,042,600 Btu/Hr.
Available energy (latent and sensible heat loss correction factor):	57%
Gross fuel energy required:	31,654,000 Btu/Hr.
Hourly fuel cost @ \$5.00/MM Btu:	\$158.27/Hr.
Hours per year in operation:	6000 Hours
Operating fuel costs:	\$949,620/Yr.

*As requested for the Jacksonville Afterburner, this theoretical heat release will not be used to calculate burner sizes or fuel consumptions.

Rev. I - Process exhaust temperature changed from 300°F dry to 118°F saturated.

10,000 SCFM AFTERBURNER
ROSS-WALDRON PROPOSAL NO. IN6011025-1

GENERAL FOODS CORPORATION
APRIL 18, 1986

GENERAL DESCRIPTION

The Ross Stack Fume Afterburner is designed to pass air from coffee roasting process through a combustion burner which raising the contaminants and holds it at the afterburner temperature for approximately 0.5 seconds. Contaminants are thereby consumed and the cleaned air is discharged to the atmosphere.

The operating temperature of the afterburner depends upon the type and nature of the contaminants and the control regulations for the area in which the afterburner is operating. The minimum temperature at which the unit is usually operated is that at which 90% or more of the contaminants are reduced to harmless water vapor or carbon dioxide and thus maintaining the level of contaminants exhausted within acceptable limits.

When the contaminants contain volatiles and the volatile laden air is passed through the burner flame, the volatiles are ignited, providing an additional source of heat energy which will allow automatic throttling back of the gas supply to the burner to conserve gas. The burners then continue to modulate to maintain the Afterburner temperature according to the amount of combustible volatiles in the exhaust air, taking full advantage of the energy released by the volatiles. This permits lowest possible operating costs and maximum efficiency using the direct afterburner design.

The afterburner is designed to destroy contaminants containing only he elements of carbon, hydrogen, oxygen and nitrogen (in air). It is assumed that the contaminates and fuel are volatiles which upon oxidation will produce harmless products of combustion, namely, water vapor and carbon dioxide. However, the contaminants and fuel may have other substances besides hydrocarbons which might form products of combustion other than H₂O and CO₂. Therefore, it should be remembered that these impurities should be kept to a minimum so as not to violate any regulations.

MATERIALS OF CONSTRUCTION

The afterburner will be constructed of preassembled sections having an interior lining of high temperature refractory with outer casing of heavy gauge metal. Necessary drawbands and cement are included. An access door will be provided in the dwell chamber for inspection of the Afterburner and periodic maintenance. A sight port will be provided for observation of burner and pilot.

The Afterburner is mounted on skid steel for shipping and field setting. No platforms, walkways, handrails, or ladders are included.

It is assumed the afterburner will be erected on a concrete pad or a steel base furnished by purchaser.

10,000 SCFM AFTERBURNER
ROSS-WALDRON PROPOSAL NO. IN6011025-1

GENERAL FOODS CORPORATION
APRIL 18, 1986

The afterburner will be approximately 36'-0" high x 72" outside diameter. The approximate erected weight will be 18,000 lbs.

BURNERS AND CONTROLS

As part of the afterburner system, we will provide the complete burner, safety control and temperature control system. The burner will be a gas/oil packaged type of special design. The purchaser is to supply the required volume of fuel at the required pressure for efficient burner operation. The set of insurance safety equipment will be provided with the necessary interlocks to the roaster control system.

The burner is mounted on the face of the afterburner combustion chamber. No piping or wiring of the fuel valve train is included. This burner train equipment will be shipped direct to the field, for customer's field installation.

INSTRUMENTATION

One (1) Barber Colman temperature controller will be furnished. The temperature controller is complete with thermocouples and necessary T/C extension wire.

All afterburner controls will be mounted in a NEMA 12 electrical control panel located indoors.

FAN AND MOTOR

We will furnish one (1) centrifugal type fan capable of handling 18,120 CFM at 3.5 S.P. cold.

The fan will be driven by a 15 HP, 1800 RPM, totally enclosed fan cooled motor, drive, vortex damper and remote manual operator.

DRAWINGS AND DATA

Ross-Waldron shall furnish three (3) complete sets of drawings as follows:

Spare Parts List
Instruction Manuals
Maintenance Manuals

Outline Dimensions Drawings
Assembly Drawing
Wiring Drawings

10,000 SCFM AFTERBURNER
ROSS-WALDRON PROPOSAL NO. IN6011025-1

GENERAL FOODS CORPORATION
APRIL 18, 1986

ERECTION AND STARTUP

No erection, erection coordination of field start-up services are included in this proposal.

SAFETY CONTROLS AND OTHER FEATURES

All safety controls and other features incorporated in this proposal are specified on the basis of generally accepted insurance standards as known to us. Additional safety controls and other features required by the purchaser or by any law, regulation, ordinance, insurance agency or special requirement such as U.L. approval, will be furnished at additional cost.

OSHA

Compliance with OSHA under the law is the responsibility of each employer.

Somerset Technologies, Inc., endeavors to comply with the purposes and the applicable standards of OSHA. The prices quoted herein do not include any special charges for OSHA compliance. In no event shall Somerset Technologies, Inc., be liable for direct, incidental, or consequential damages arising out of or resulting from the operation of Somerset Technologies, Inc., equipment or accessories.

In the event that the items quoted herein are found not to comply with OSHA, at the customer's request, and at his expense, Somerset Technologies, Inc., will endeavor to make improvement, if technically feasible.

EQUIPMENT NOISE LEVEL

We do not include system noise abatement equipment since the noise level of the equipment operating in conjunction with the equipment's environment, cannot be predetermined.

If the noise level exceeds standards, we will furnish, at additional cost the necessary sound absorption materials required.

CONFIDENTIALITY INFORMATION

All drawings, specifications, technical data, including this proposal, and other information we provide, is considered confidential, and the exclusive property of Somerset Technologies, Inc. The information may be used only for the purpose for which material was expressly loaned and shall not be reproduced, copied or used in any way detrimental to the interest of Somerset Technologies, Inc.

10,000 SCFM AFTERBURNER
ROSS-WALDRON PROPOSAL NO. IN6011025-1

GENERAL FOODS CORPORATION
APRIL 18, 1986

SHIPMENT

Our present schedule for shipping the proposed equipment is approximately fourteen (14) to sixteen (16) weeks after receipt of formal purchase order. This projection is based on receipt of all engineering information at the time of order and customer approval to release equipment for manufacturing prior to drawing approval. Some partial and direct shipments will be made earlier.

ITEMS TO BE PROVIDED BY OTHERS UNLESS DESCRIBED IN THIS PROPOSAL

Claims for damages in transit to the transportation company.

Labor and material to unload and move equipment from the delivery carrier to the installation site, including suitable storage and protection for all components and delivery to installation site when equipment is required for installation.

Suitable location and preparations of foundations, including anchor bolts, shimming and grouting, along with buildings and building alterations required.

Labor and supervision for the proper installation of the equipment, including field cutting, welding and bolting as noted.

Permits and approvals as may be required by any and all insurance, governmental, or local authorities.

Applicable sales, use, excise or similar taxes.

Additional costs incurred for fees and/or preparation of drawings or data for approval by insurance, governmental or local agencies.

Utilities as required for installation and operation of the equipment.

Electrical, pneumatic, hydraulic interconnecting wiring and piping including material and labor, except for those items specifically described as piped and wired in this proposal.

Lighting and equipment grounding protections.

Fire protection equipment.

Field painting.



10,000 SCFM AFTERBURNER
ROSS-WALDRON PROPOSAL NO. IN6011025-1

GENERAL FOODS CORPORATION
APRIL 18, 1986

Insulation of exposed surfaces of equipment.

Material handling, equipment such as hoists, dollies, pumps, etc.

Costs incurred in obtaining Underwriters Laboratories approval shall be borne by the Purchaser.

Services and equipment not specifically described.

10,000 SCFM AFTERBURNER
ROSS-WALDRON PROPOSAL NO. IN6011025-1

GENERAL FOODS CORPORATION
APRIL 18, 1986

EQUIPMENT PRICING

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>PRICE</u>
Base	Provide one (1) 10,000 SCFM Direct Fired Afterburner System as described in this proposal (ONE HUNDRED TWENTY-EIGHT THOUSAND SIX HUNDRED EIGHTY-FIVE DOLLARS)	\$128,685

All prices F.O.B. Shipping Points, Freight Collect

FREIGHT

If the purchaser desires the freight 'Prepay and Bill', the freight charges will be accumulated monthly and invoiced at cost. A service charge of 5% of the freight bill, with a minimum charge of \$60.00 will be added to each monthly invoice.

TERMS

25% cash with purchase order.

65% progress billings based on sales value of engineering and/or material and labor consumed during the previous month, payable net 30 days.

Final 10% of sales value issued upon shipment of all major components or completion of services as contracted, payable net 30 days.

NOTE: A service charge of 1% per month applies after payment due date.

The equipment quoted is subject to the attached Terms and Conditions of Sale, Form #SA-6 of 4/82.

ST
SOMERSET TECHNOLOGIES, INC.

ROSS - WALDRON

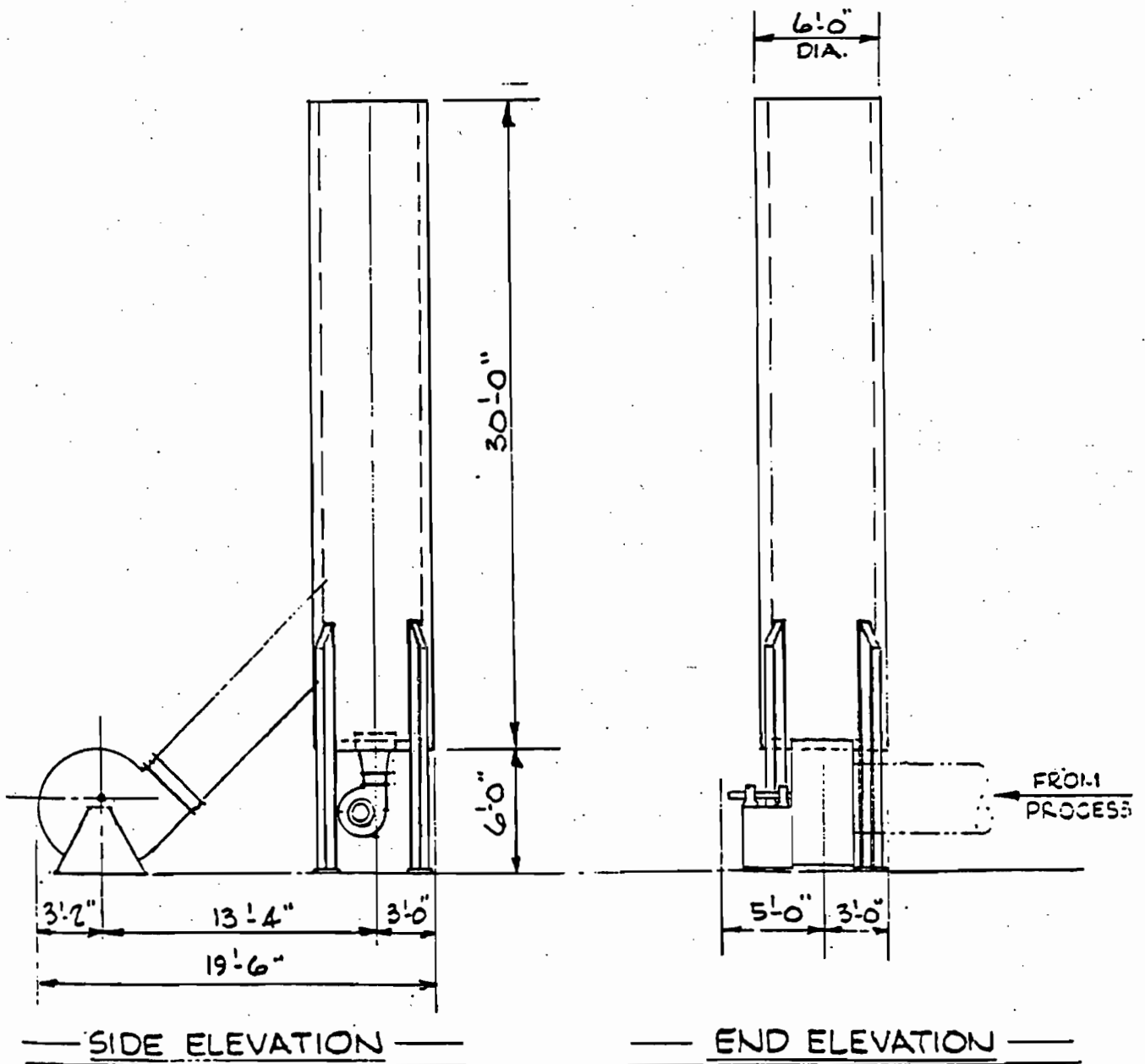
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DATE: 4/16/86
REF. DWG.: —

CONTRACT #: —

SKETCH #: 1025-A
FOR: GENERAL FOODS
JACKSONVILLE, FLA.

NOTE!!

1. ALL DIMENSIONS APPROX.





SOMERSET TECHNOLOGIES, INC.

ROSS - WALDRON

DRAWN BY: JG

DATE: 4/17/86

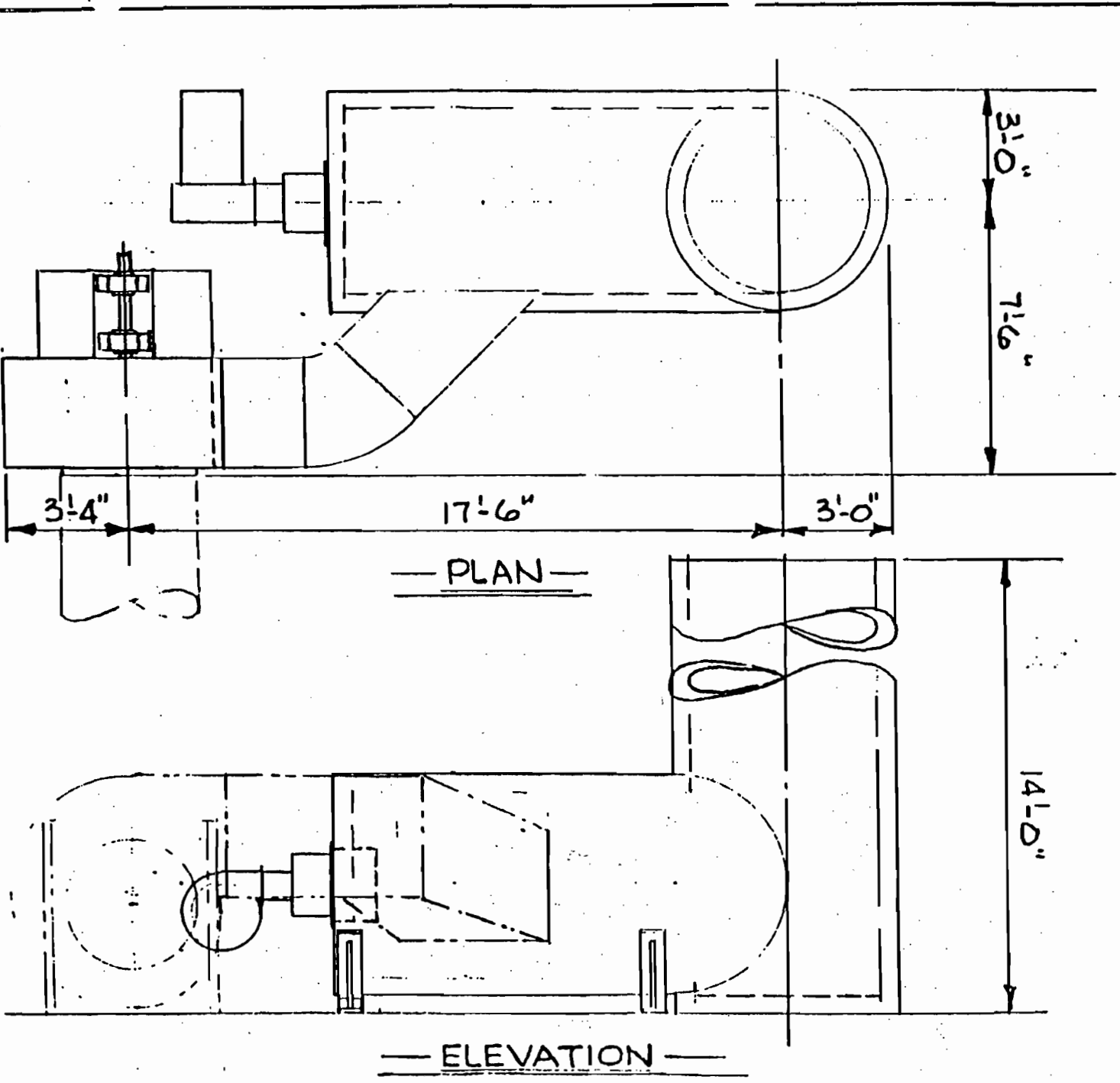
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CONTRACT #: —

SKETCH #: 1025-B

FOR: GENERAL FOODS

JACKSONVILLE, FLA.



BOMERSET TECHNOLOGIES INC.

GENERAL FOODS CORPORATION

Proposal No. IN6011025-1

April 18, 1986

TERMS AND CONDITIONS OF SALE

Seller is not bound by any terms and conditions of sale unless agreed to in writing by Seller's authorized representatives at its divisional home office. The terms and conditions contained herein and any other terms and conditions stated in Seller's proposal or specifications attached hereto shall constitute the complete agreement between the Seller and Purchaser and shall supersede all prior understandings, transactions and communications, whether oral or written, with respect to the matters referred to herein and form the complete contract between the Seller and Purchaser, and shall be binding upon and accrue to the benefit of the successors and assigns of the parties hereto. No modification, alterations or amendment of the terms and conditions of sale herein whether by conditions in Purchaser's order forms or in Purchaser's written communication shall be binding upon Seller unless agreed to in writing and signed by Seller's authorized representatives at Seller's home office. This contract shall be construed according to the laws of the State of NJ including, but not limited to, the Uniform Commercial Code as therein enacted.

The failure of Seller to object to any provision in conflict herewith, whether contained on the Purchaser's purchase order or otherwise, shall not be construed as a waiver of the provisions hereof or as an acceptance of the Purchaser's terms.

PROPOSALS

Until accepted by the Purchaser and countersigned by Seller, any quote or proposal submitted to Purchaser herein is subject to change or cancellation upon written notice to the Purchaser and is void unless so accepted by Purchaser within thirty days of the date of said quote or proposal and subsequently countersigned on behalf of Seller.

WARRANTY

Except as hereinafter in this section set forth, all equipment sold by Seller is warranted for a period of one year from the date of shipment to the Purchaser to be free from latent defects in material and workmanship disclosed under normal use and service. If the Purchaser within the period notifies Seller in writing of any claimed defect in any equipment delivered by Seller and such equipment is found by Seller, after appropriate tests and inspection by Seller, not to be in conformity with this warranty, Seller will at its option and expense either repair the same or provide a replacement therefore, F.O.B. Seller's shipping point. **THE WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR PARTICULAR USE.**

LIABILITY LIMITATION

In the event of a breach or repudiation of this contract on any of the provisions by the Seller, Purchaser shall not be entitled to recover incidental or consequential damages including those arising upon breach of **IMPLIED WARRANTY OF MERCHANTABILITY** or any losses, costs, expenses, liabilities and damages (including, but without limitation to, loss of use or profit, damages to property, all liabilities of the Purchaser to its customers or third persons, and all other special or consequential damages) whether direct or indirect, and whether or not resulting from, or contributed to by the default or negligence of Seller, its agents, employees, or subcontractors, which might be claimed as the result of the use or failure of the equipment delivered. Nor shall the Purchaser be entitled to recover any costs for materials expended or used, initiated at the request of the Buyer or Purchaser. Seller's liability on its warranty shall in no event exceed its cost of correcting the defects in the equipment sold or replacing the same with non-defective equipment.

SUBSTITUTION OF MATERIALS:

In the event that Seller is unable to obtain any specified materials or parts in time to meet the scheduled delivery date, Seller reserves the right to substitute other materials or parts which will not in Seller's judgment impair the essential functions, strength or life of the equipment.

SHIPMENTS

All equipment will be shipped F.O.B. Seller's point of shipment. Unless special shipping instructions are received from the Purchaser substantially before the shipment date, Seller will use its reasonable judgment as to the best means of shipment and routing consistent with the nature of the equipment shipped and the delivery schedule.

TAXES

The price herein does not include any applicable sales, use, excise or similar taxes, now or hereafter in effect. The amount of any such taxes which Seller may be required to pay or to collect from the Purchaser will be added to each invoice unless the Purchaser has furnished Seller with an appropriate tax exemption certificate acceptable to Seller. Seller will further invoice the Purchaser for, and the Purchaser will pay to Seller any other tax or charge hereafter imposed by any governmental authority upon any part of the equipment described herein or the production, sales, transportation or delivery thereof, or upon any other feature of this transaction.

TITLE AND SECURITY

Seller shall retain title and a Security Interest to all equipment sold as described herein until the purchase price shall be fully paid. And it is agreed that all equipment shall retain its personal character, and shall not become a fixture by being attached or affixed in any manner to any land, machinery, foundation or building of any sort; and that if it be placed on any property subject to mortgage or encumbrance, it shall not be subject to such mortgage or encumbrance. Until fully paid for in cash, the Purchaser shall keep all equipment free and clear of all taxes, liens and encumbrances of any nature whatsoever or howsoever arising and shall provide and maintain adequate insurance thereon (for the full value thereof as shown by the contract price herein plus all installation costs) against loss or damage caused by fire or other casualty customarily insured against all losses under said policies to be payable to Seller or Purchaser as interest may appear. Upon default in the payment of any part of the purchase price, Seller shall have the right at its election to take possession of all equipment and remove the same, without legal process or hindrance or to enter upon Buyer's premises and render such equipment unusable, and to retain all payments previously made as compensation for its use and wear. Upon demand of Seller, the Purchaser shall execute and deliver to Seller such further documents and other instruments (including the assent or agreement of any persons having interests in or liens upon the property upon which the equipment is placed) in form satisfactory to Seller, which Seller may reasonably require to secure to Seller the rights conferred upon it under this section.

ADDITIONAL TERMS OF SALE

If Seller in its judgment at any time, whether before or after acceptance of an order, deems that the continuance of production or delivery on the foregoing terms is not justified, or if the Seller reasonably deems his Security to be in jeopardy, he may require full or partial payment in advance.

Seller shall not be held responsible for loss or damages or excess cost resulting from the means of shipment or routing used or for any other losses or damages arising while in transit, and the Purchaser agrees to make any claim therefor directly against the carrier.

TIME OF DELIVERY AND INSTALLATION

Seller will use all reasonable diligence to meet the schedule dates for shipment, delivery, and installation but cannot guarantee any delivery or completion date. Seller shall not be liable for any loss, damage, expense or charge of any kind resulting from delay in delivery, installation or attainment of operational status of the machinery.

APPLICABLE LAW

Seller agrees that, in the performance of all work hereunder, it will comply with those laws, regulations, and ordinances of the United States, State and local governments and of all agencies of any such government, which are specifically brought to its attention, negotiated, and specifically agreed to, in writing, by the Seller. However, to the extent that such laws and regulations are changed after the date of Seller's original proposal herein and to the extent that such changes will increase Seller's cost in the performance such additional cost, if determined by Seller, will be borne by Purchaser.

The foregoing condition does not cover, and the Seller makes no warranty with respect to:

- (a) Compliance with laws taking effect after execution of this contract;
- (b) Compliance with laws not specifically brought to Seller's attention by Purchaser, negotiated, and specifically agreed to, in writing, by Seller.

If any provision hereof becomes unenforceable by reason of any such law, rule, regulation, ordinance or order, the same shall not affect the validity of the remainder hereof if performance of the order may still be carried out.

CANCELLATION OR CHANGES REQUIRED BY PURCHASER:

No order is subject to cancellation or to change unless requested by the Purchaser and accepted in writing by Seller. In the event of any cancellation, the Purchaser shall pay to Seller within thirty days of such cancellation all contract costs and other expenses incurred by Seller prior to receipt of the request for cancellation (including, but not limited to, engineering expenses and all commitments to its supplier, sub-contractors and others), plus an amount equal to 15% to cover general and administrative expenses plus 10% of the total to cover profit lost by reason of cancellation. In the event of any change, Seller shall be entitled to revise its price and delivery schedules to reflect such change.

PATENTS

Subject to the conditions hereinafter provided, in the event that any claim is made or action brought against the Purchaser so far as based on a claim that any apparatus or any part thereof constitutes an infringement of any U.S. Letters Patent, the Purchaser is to notify Seller immediately thereof. Seller shall have the right with the Purchaser's assistance, if required, but at Seller's expense, to conduct settlement negotiations or any litigation and Seller shall pay all damages awarded against the Purchaser. In case said apparatus or any part is in such action held to be an infringement and the use is enjoined or if as a result of a settlement, Seller deems the continued use inadvisable, then provided that the Purchaser has given the immediate notice provided for above and has used the apparatus or parts only in accordance with the provisions of this contract and shall not have altered or changed them in any material way, Seller shall at its option and expense, either procure for the Purchaser the right to continue using said apparatus or part; or replace same with non-infringing apparatus or part; or remove same and refund the purchase price less reasonable depreciation; provided, however, that in the event that any equipment, article, or component is manufactured by the Seller in accordance with Buyer's designs, blueprints, samples or specifications, Seller shall have no obligations as to infringement and Buyer shall indemnify and save Seller harmless from any and all expenses, injury or loss arising out of claims of patent, design and trademark infringement because of the manufacture, use or sale thereof; and provided further, no license or right to Buyer, express or implied, is granted hereunder by the Seller under any patent or patent application, design patent or trademark owned or controlled by the Seller except to the extent necessary to permit the Buyer to use the equipment or products manufactured by the Seller. The foregoing states Seller's entire liability for patent infringement by said apparatus or any part.

SOMERSET TECHNOLOGIES INC.

- Cameron Machine Division
- Hartig Plastics Machinery Division
- Ross-Waldron Division
- Kathabar Systems Division

Proposed by James E. Caffrey
For the Sales Department

Buyer _____

Final Acceptance: _____

Approved by _____

By _____

Title _____

Title _____

Date _____

Date _____

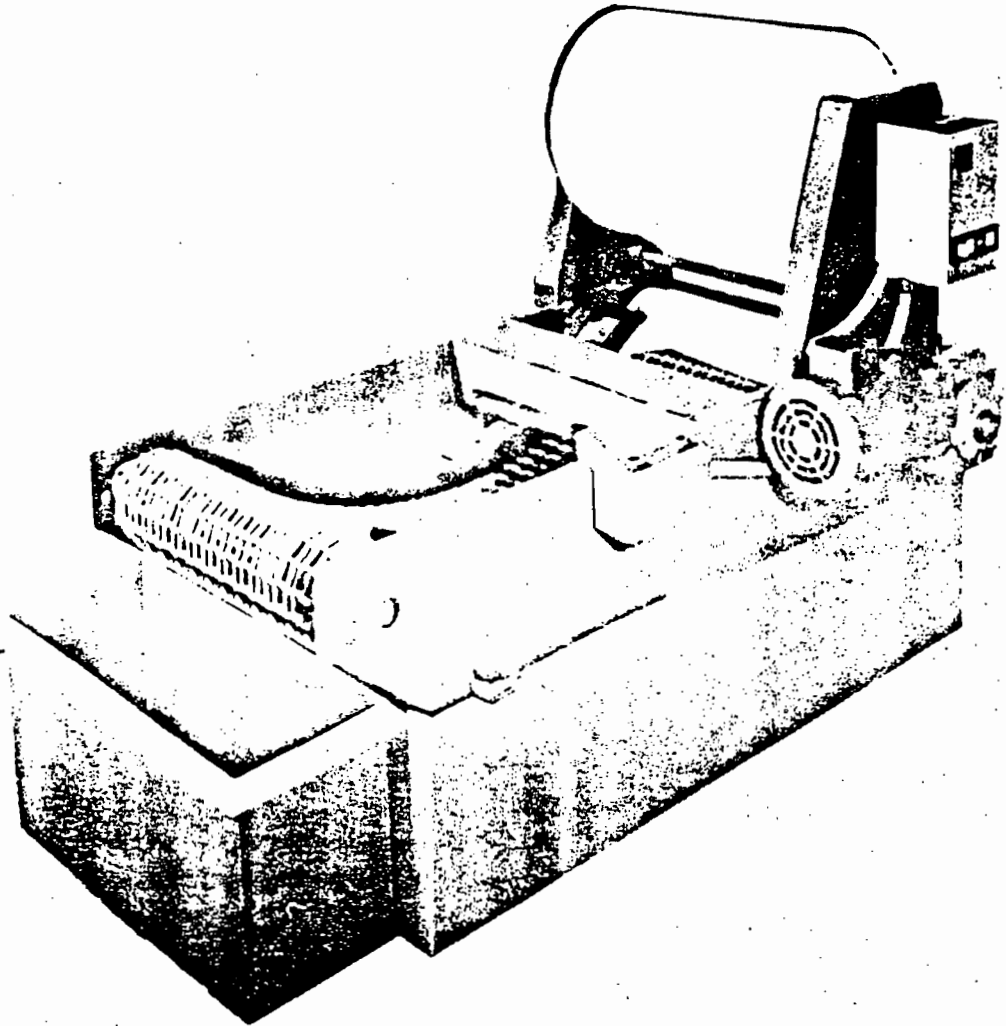
ATTACHMENT 11-D

VENDOR DATA
EMISSION POINT NO. D3

VENTURI SCRUBBER PURGE FILTER

MODEL DB-15

DEEP BED FILTER



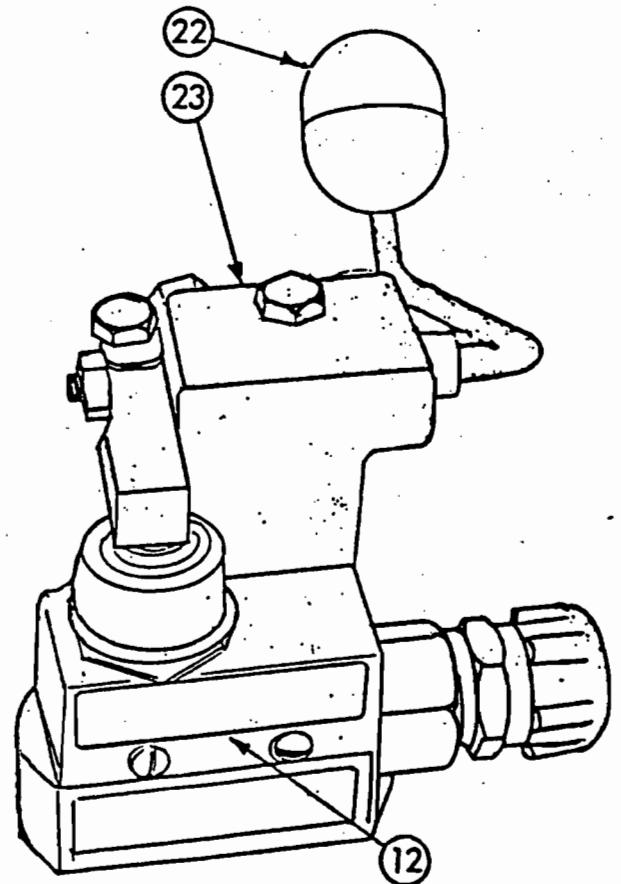
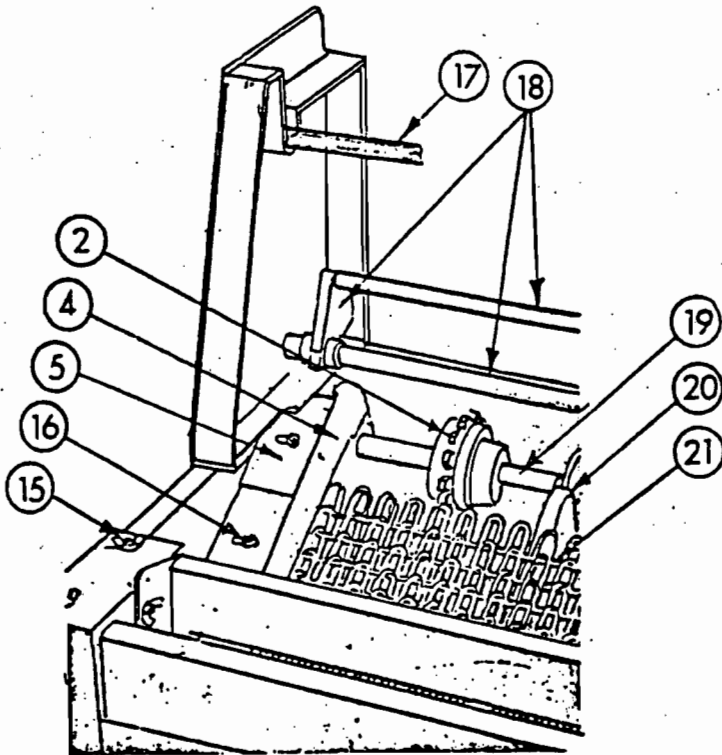
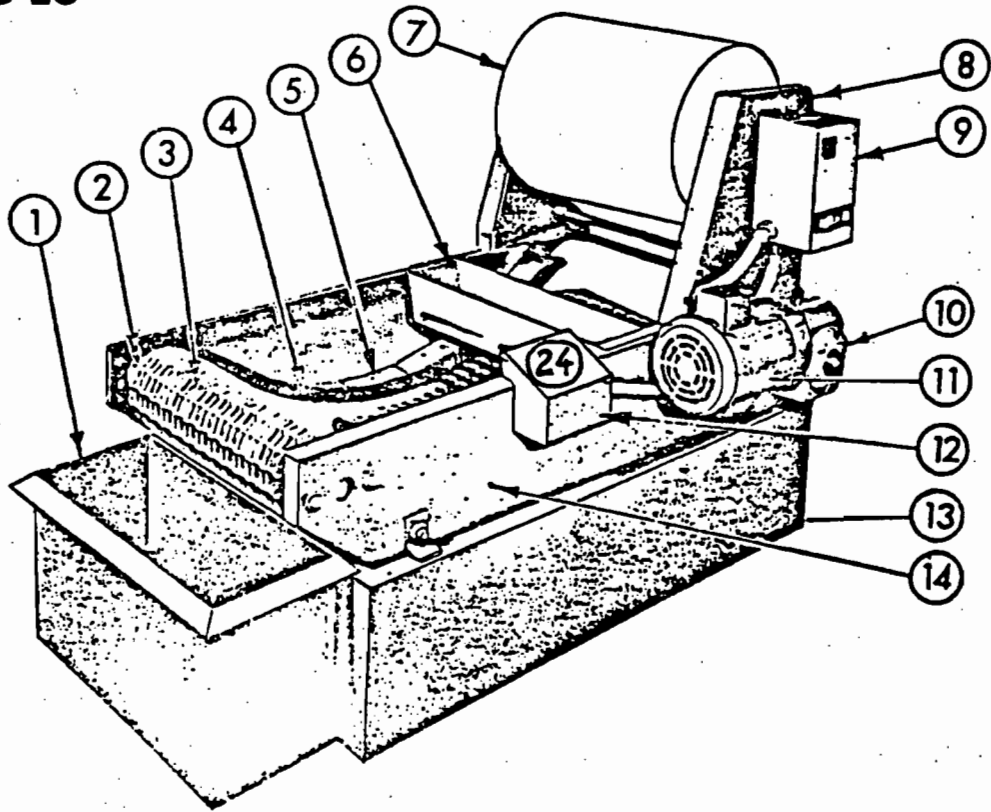
OPERATING INSTRUCTIONS and PARTS LIST

Industrial Filters Company

MANUFACTURERS OF FILTRATION EQUIPMENT FOR INDUSTRY

9 Industrial Rd. • Fairfield, New Jersey 07006

MODEL DB-15



DEEP BED FILTER PARTS LIST**MODEL DB-15**

KEY #	PART NO.	DESCRIPTION
1	DB-30	SLUDGE BOX
2	DB-26A	SPROCKETS, 4"
2	DB-26C	PULLEYS, 4"
3	DB-20	CONVEYOR BELT — GALVANIZED
3	DB-21	CONVEYOR BELT — STAINLESS STEEL
4	DB-25	SEAL STRIPS
5	DB-36	SEAL HOLD-DOWN PLATES — STAINLESS STEEL
6	DB-34	DIFFUSER
7	DB-100	FABRIC ROLL (SPECIFY GRADE)
8	DB-72	FABRIC ROLL BRACKETS
9	DB-38A	STARTER 115-1-60
9	DB-38B	STARTER 220-1-60
9	DB-38C	STARTER 440-3-60
10	DB-19	SPEED REDUCER
11	DB-17A	MOTOR 115-1-60, 220-1-60
11	DB-17B	MOTOR 220/440-3-60
12	DB-52	MICRO SWITCH
13	DB-32	TANK
14	DB-2	FILTER FRAME ONLY
15	DB-82	WING NUTS
16	DB-81	HEX NUTS AND WASHERS
17	DB-58	FABRIC TUBE HOLDER
18	DB-56	FABRIC HOLD DOWN BAR ASSEMBLY
19	DB-48A	CONVEYOR SHAFT (FEED END)
—	DB-48B	CONVEYOR SHAFT (DISCHARGE END) NOT SHOWN
20	DB-73	CONVEYOR SUPPORT RIBS
21	DB-27	NYLON WEAR STRIPS (COVERS RIBS)
22	DB-23	FLOAT BALL
23	DB-54	FLOAT ASSEMBLY (ROD, BRACKET AND PAWL)
—	DB-83C	ROLLER CHAIN, #40 (NOT SHOWN)
—	DB-47C	CONVEYOR SHAFT SPROCKET (NOT SHOWN)
—	DB-59A	REDUCER SPROCKET (NOT SHOWN)
—	DB-64	CONVEYOR SHAFT BEARING (NOT SHOWN)
24	DB-52A	MICRO SWITCH COVER

WHEN ORDERING PARTS ALWAYS SPECIFY UNIT SERIAL NUMBER, MODEL NUMBER AND PART NUMBER.

OPERATING INSTRUCTIONS

1. The Filter should be installed in a level position.
2. The Outlet Pipe or Discharge Trough from the Machine Tool or other source of dirty liquid should be directed into the Diffuser Tray suspended across the Filter Bed.
3. The Float Rod should be adjusted so that the Conveyor will index when the liquid level of coolant reaches the high point — usually about one inch and a half below the side rails of the unit. To do this remove micro switch cover and adjust hex nut on pawl.
4. The first roll of Filter Fabric should be threaded **Under The Red Tube Behind The Conveyor** and then into the first few inches of black sealing material on each side of the Filter Bed. Turn the Selector Switch to hand and guide the fabric along the conveyor until the bed is covered with fabric. This method must be used only once — the first time the new fabric is placed in the filter. Succeeding rolls may be fed into the Filter by merely over-lapping the trailing edge of the expended fabric with leading edge of the fresh roll by a few inches. From this point on the Filter will index the fresh fabric into the Filter automatically on demand.
5. The Filter should require little maintenance other than the changing of Filter Fabric. All Filter Bearings are sealed. The motor is lubricated for a ten year period.
6. The track on which the conveyor rides is surfaced with nylon bearing strips. These pieces are replaceable.
7. Eighteen different grades of Filter Fabrics are available for use with this Filter. The Filter Fabric Literature is enclosed in this envelope.
8. If gear reducer shaft rotates, but conveyor does not move tighten large nut (#30) on torque limiter one quarter turn each time until conveyor moves. (Model DB-15 does not have torque limiter)

NOTE: This Filter will only operate properly when used under operating conditions with a pool of liquid on top of the Filter Fabric. Do not expect the fabric to index properly until the pool has reached its maximum depth. If the filter does not index due to mechanical failure or for some other reason the liquid will overflow into the tank below the filter.

ATTACHMENT 11-E

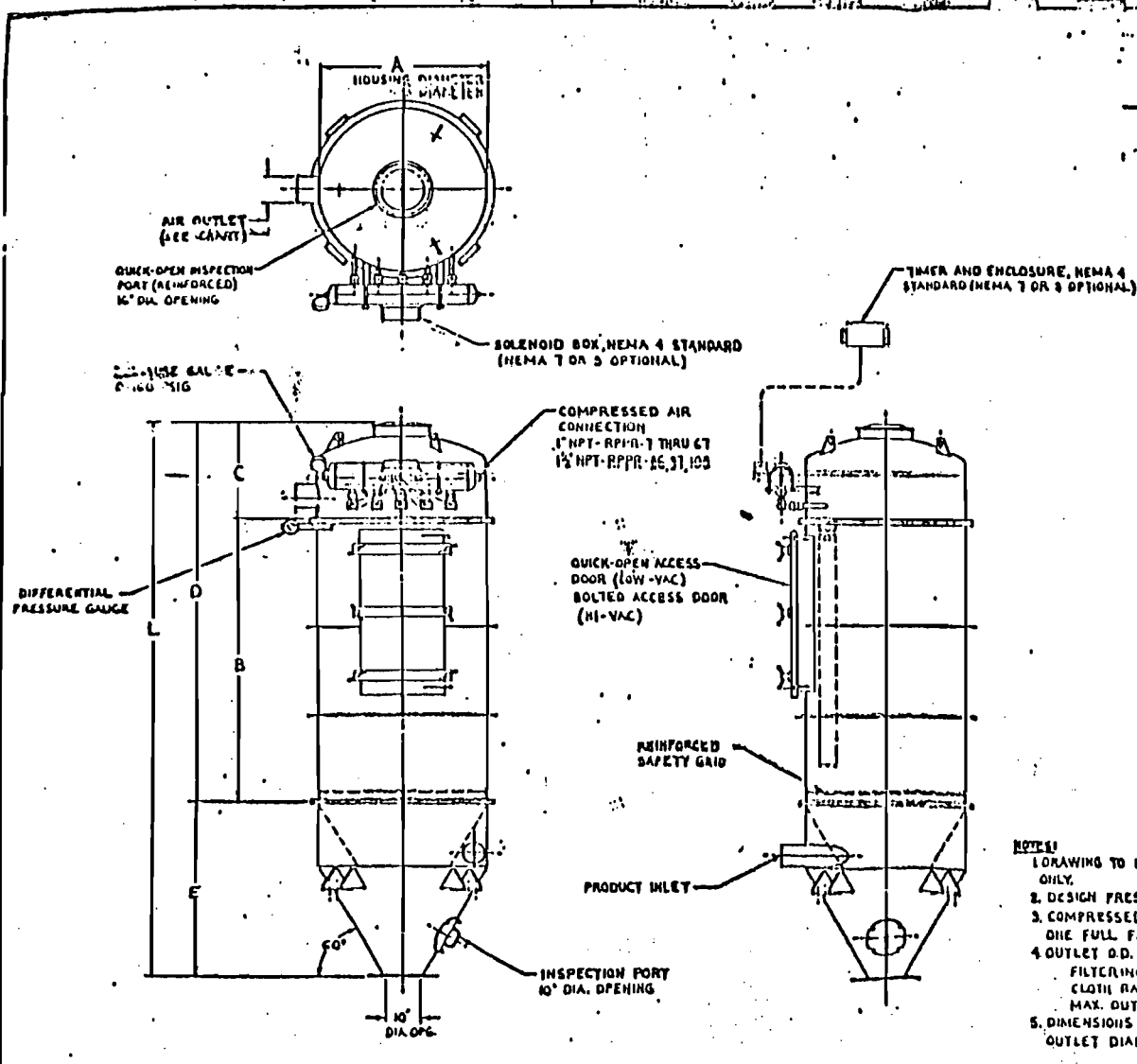
VENDOR DATA
EMISSION POINT NO. D4

DUCOM CYCLONE

ATTACHMENT 11-F

VENDOR DATA
EMISSION POINT NO. D5

BUHLER-MIAG BAGHOUSE



MODEL No.	DATA				DIMENSIONS (INCHES)					NOTE		
	INTRA AREA (DIA.)	NO. OF PAGES	BAG LENGTH (FT.)	NO. BAGS PER HOUR	A	B	C	D	E	L	NO. 10" DIA. OPG.	NO. 10" DIA. OPG.
RPPR-7/2	17	2	3	14	30	31	20	53	34	61	3	355
RPPR-7/3	30	7	5	14	30	46	20	65	14	107	3	106
RPPR-7/4	40	5	7	14	30	57	37	77	31	111	4	157
RPPR-7/6	62	7	6	19	30	81	73	107	31	132	6	214
RPPR-10/2	27	10	2	20	35	33	12	55	33	74	3	158
RPPR-10/3	42	10	3	22	36	45	22	61	33	106	4	217
RPPR-10/4	58	10	4	24	36	57	22	73	33	113	5	253
RPPR-10/6	83	10	6	27	36	81	22	103	33	142	6	321
RPPR-10/8	113	10	8	31	36	105	22	127	33	168	7	423
RPPR-14/2	53	14	3	4	31	36	45	72	33	50	4	302
RPPR-14/4	81	14	4	4	34	57	22	73	33	116	5	313
RPPR-14/6	124	14	6	4	38	81	22	103	33	145	7	413
RPPR-14/8	167	14	8	4	42	105	22	127	33	174	8	528
RPPR-18/4	104	18	4	4	43	57	25	82	43	150	6	427
RPPR-18/6	150	18	6	4	49	81	25	106	43	181	8	530
RPPR-18/8	195	18	8	4	54	105	25	133	43	213	9	634
RPPR-24/4	133	24	4	5	50	57	26	83	53	156	7	470
RPPR-24/6	213	24	6	5	63	81	26	107	53	185	9	576
RPPR-24/8	281	24	8	5	72	105	26	131	53	216	10	674
RPPR-30/4	173	30	4	6	72	54	30	81	59	155	8	551
RPPR-30/6	256	30	6	6	81	81	30	111	59	185	10	652
RPPR-30/8	336	30	8	6	90	105	30	135	59	213	12	751
RPPR-41/4	231	41	4	7	75	60	31	90	69	169	10	724
RPPR-41/6	363	41	6	7	91	81	31	114	69	193	12	823
RPPR-41/8	490	41	8	7	103	105	31	138	69	221	14	928
RPPR-48/4	125	48	4	7	110	60	34	95	73	173	11	752
RPPR-48/6	173	48	6	7	124	81	34	118	73	201	14	852
RPPR-48/8	213	48	8	7	144	105	34	143	73	231	16	952
RPPR-56/6	196	56	6	8	151	105	37	142	92	232	16	952
RPPR-56/8	269	56	8	8	168	124	37	172	92	262	18	1052
RPPR-67/6	251	67	6	9	181	105	40	171	97	268	18	1052
RPPR-67/8	300	67	8	9	201	124	40	195	97	292	20	1152
RPPR-84/6	162	84	6	11	232	84	43	124	102	226	18	923
RPPR-84/8	207	84	8	11	258	105	43	148	102	250	20	1023
RPPR-107/8	1158	97	8	11	291	90	44	149	103	257	20	973
RPPR-107/6	1230	108	6	11	324	96	46	151	113	264	22	1026

- NOTE:**
- DRAWING TO BE USED FOR GENERAL ARRANGEMENT ONLY.
 - DESIGN PRESSURE = 211" MERCURY COLUMN.
 - COMPRESSED AIR REQUIREMENTS BASED ON ONE FULL FILTER CLEANING CYCLE PER MINUTE.
 - OUTLET O.D. CALCULATIONS BASED ON:
 FILTERING VELOCITY = 8 FT./MIN. (AIR TO CLOTH RATIO 8:1)
 MAX. OUTLET VELOCITY = 4000 FT./MIN.
 - DIMENSIONS E & L ARE BASED ON A PRODUCT OUTLET DIAMETER OF 10".

REVERSE PULSE PRODUCT RECENER	
GENERAL DATA (ANGULAR MIL)	
DUNLEN-MAD, INC.	
MINNEAPOLIS, MINNESOTA	
AUPP-41162	

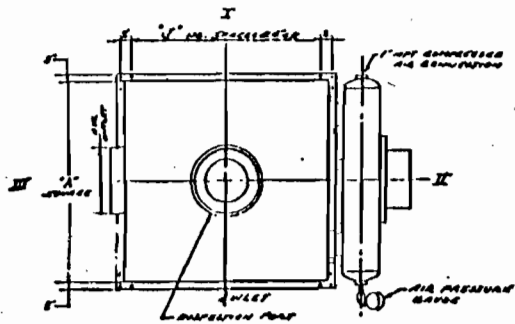
GENERAL INFORMATION & NOTES	DATE	BY	CHKD BY	DATE	BY

ATTACHMENT 11-G

VENDOR DATA
EMISSION POINT NO. D6

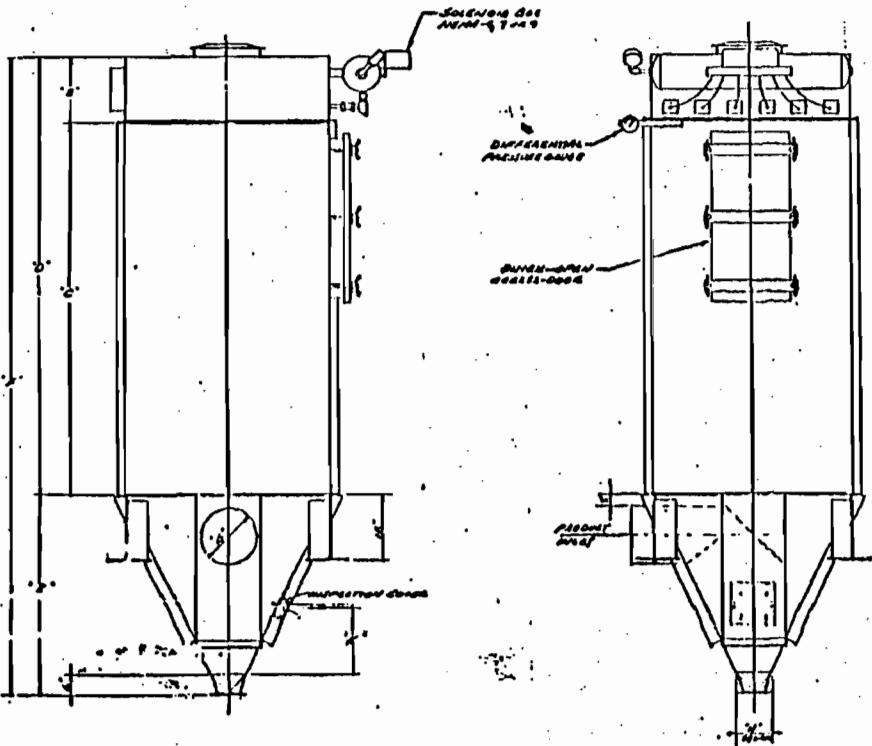
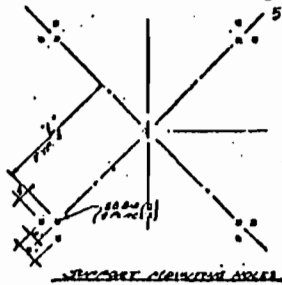
BUHLER-MIAG BAGHOUSE

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DEAL NO.
510-671
510-694

DIMENSIONS (IN INCHES)												
MODEL NO.	A	B	C	D	E	F	G	H	I	J	WEIGHT (LBS.)	
22DC-34	20	14	27	22	28.2	14.2	0	14	18	11.2	11.2	11.2
22DC-416	24	18	36	28	32.2	17.2	0	18	24	14.2	14.2	14.2



NOTES:

- 1- ALL DIMENSIONS ARE IN INCHES.
- 2- DRAWING TO BE USED FOR DESIGN AND FABRICATION ONLY.
- 3- DIMENSIONS OF VESSEL (EXCEPT) BASE AND FEED PIPES EXCEPT STEEL PIPE UNLESS OTHERWISE SPECIFIED.
- 4- WEIGHT IS CALCULATED BASED ON:
 - INTERNAL VOLUME OF VESSEL (AS TO EXISTING DESIGN)
 - WEIGHT OF VESSEL AND FEED PIPES
- 5- WEIGHT OF MATERIALS WILL BE FOR VESSEL AND FEED PIPES ONLY. WEIGHT OF VESSEL AND FEED PIPES WILL BE FOR VESSEL AND FEED PIPES ONLY.
- 6- WEIGHT AVAILABLE ON THIS SHEET, EXCEPT VESSEL AND FEED PIPES, WILL BE FOR VESSEL AND FEED PIPES ONLY.

REV: 1954 7510-721

REVERSE ENGINEERING DUHLER-MIAG, INC. MINNEAPOLIS, MINNESOTA	AUG 6 1959
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ATTACHMENT 11-H

VENDOR DATA
EMISSION POINT NO. D7

DALAMATIC BAGHOUSE

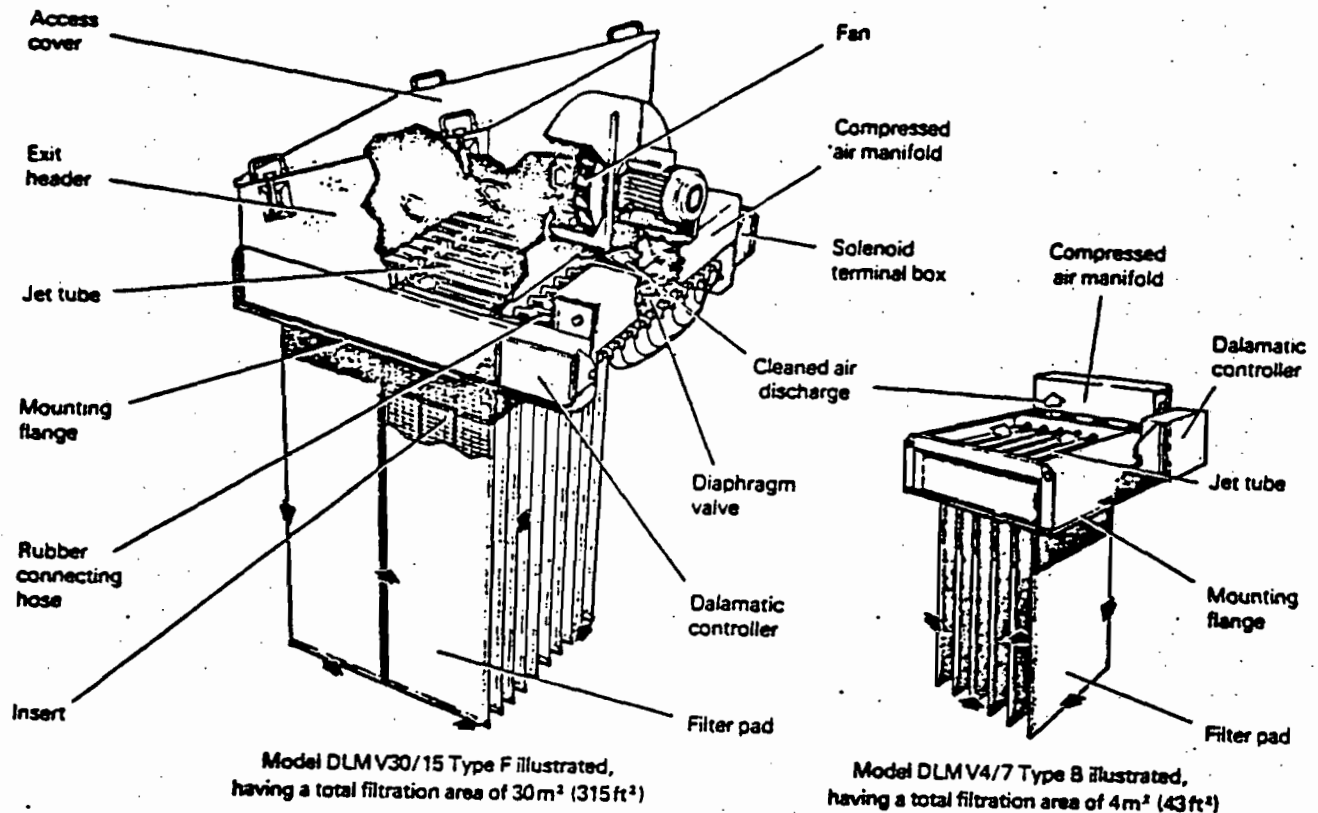
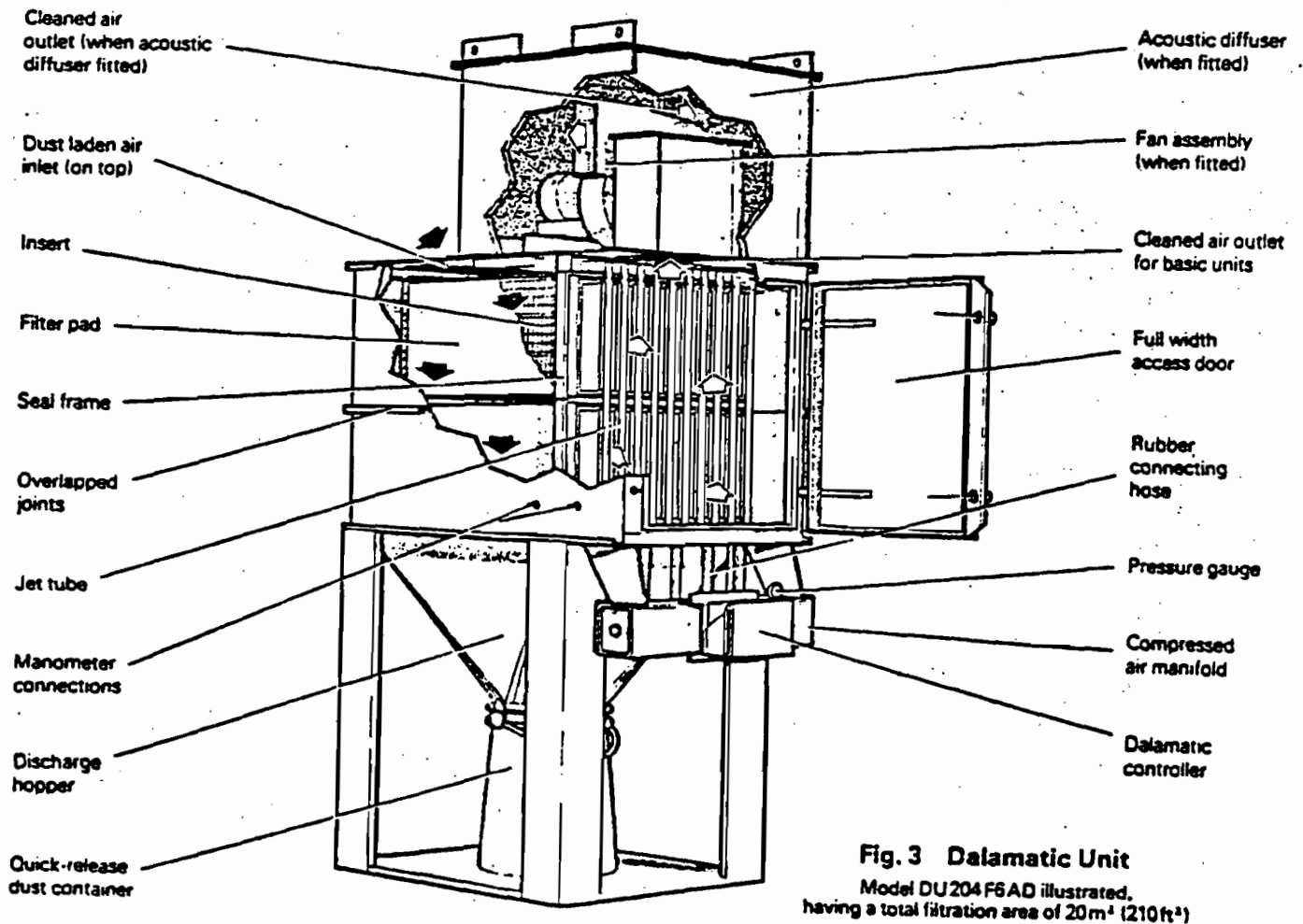
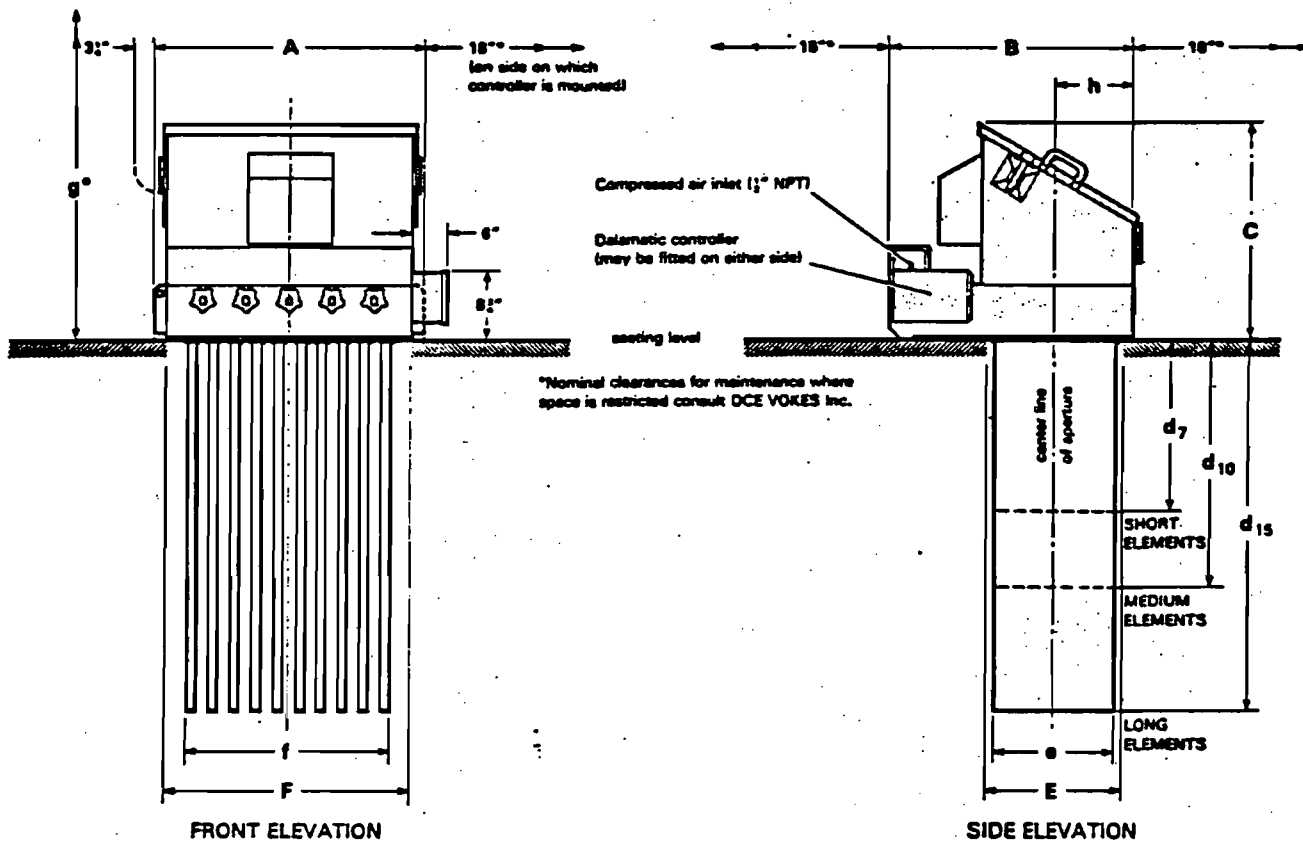


Fig. 2 Dalmatic Insertables



Dalamatic Insertable Filter Series DLM-V, Type W

Please note our new name:
DCE, Inc.



Size DLM-V15/15W illustrated, broken lines representing DLM-V7/7W & DLM-V10/10W

MODEL	DIMENSIONS (Tolerance ±1/8" on main dimensions)										Approx. net weight		
	A	B	C	d ₇	d ₁₀	d ₁₅	E	e	F	f		g	h
DLM-V4/7W	2'3 1/2"	3'2 1/2"	2'8 1/2"	2'3 1/2"	-	-	20 1/2"	19"	23 1/2"	18 1/2"	3'9 1/2"	12 1/2"	300b
DLM-V6/10W	2'3 1/2"	3'2 1/2"	2'8 1/2"	-	3'3 1/2"	-	20 1/2"	19"	23 1/2"	18 1/2"	4'9 1/2"	12 1/2"	320b
DLM-V9/15W	2'3 1/2"	3'2 1/2"	2'8 1/2"	-	-	4'11"	20 1/2"	19"	23 1/2"	18 1/2"	6'5"	12 1/2"	340b
DLM-V7/7W	3'7 1/2"	3'2 1/2"	2'10"	2'3 1/2"	-	-	20 1/2"	19"	3'3 1/2"	2'8 1/2"	3'9 1/2"	12 1/2"	440b
DLM-V10/10W	3'7 1/2"	3'2 1/2"	2'10"	-	3'3 1/2"	-	20 1/2"	19"	3'3 1/2"	2'8 1/2"	4'9 1/2"	12 1/2"	485b
DLM-V15/15W	3'7 1/2"	3'2 1/2"	2'10"	-	-	4'11"	20 1/2"	19"	3'3 1/2"	2'8 1/2"	6'5"	12 1/2"	530b
DLM-V8/7W	2'3 1/2"	5'2 1/2"	2'11 1/2"	2'3 1/2"	-	-	3'5 1/2"	3'3 1/2"	23 1/2"	18 1/2"	3'9 1/2"	22 1/2"	475b
DLM-V12/10W	2'3 1/2"	5'2 1/2"	2'11 1/2"	-	3'3 1/2"	-	3'5 1/2"	3'3 1/2"	23 1/2"	18 1/2"	4'9 1/2"	22 1/2"	520b
DLM-V18/15W	2'3 1/2"	5'2 1/2"	2'11 1/2"	-	-	4'11"	3'5 1/2"	3'3 1/2"	23 1/2"	18 1/2"	6'5"	22 1/2"	570b
DLM-V14/7W	3'7 1/2"	5'2 1/2"	2'11 1/2"	2'3 1/2"	-	-	3'5 1/2"	3'3 1/2"	3'3 1/2"	2'8 1/2"	3'9 1/2"	22 1/2"	740b
DLM-V20/10W	3'7 1/2"	5'2 1/2"	2'11 1/2"	-	3'3 1/2"	-	3'5 1/2"	3'3 1/2"	3'3 1/2"	2'8 1/2"	4'9 1/2"	22 1/2"	815b
†DLM-V30/15W	3'7 1/2"	5'2 1/2"	2'11 1/2"	-	-	4'11"	3'5 1/2"	3'3 1/2"	3'3 1/2"	2'8 1/2"	6'5"	22 1/2"	925b
†DLM-V21/7W	3'7 1/2"	7'2"	3'5"	2'3 1/2"	-	-	5'5"	5'3 1/2"	3'3 1/2"	2'8 1/2"	3'9 1/2"	2'10 1/2"	1025b
†DLM-V30/10W	3'7 1/2"	7'2"	3'5"	-	3'3 1/2"	-	5'5"	5'3 1/2"	3'3 1/2"	2'8 1/2"	4'9 1/2"	2'10 1/2"	1125b
†DLM-V45/15W	3'7 1/2"	7'2"	3'5"	-	-	4'11"	5'5"	5'3 1/2"	3'3 1/2"	2'8 1/2"	6'5"	2'10 1/2"	1255b

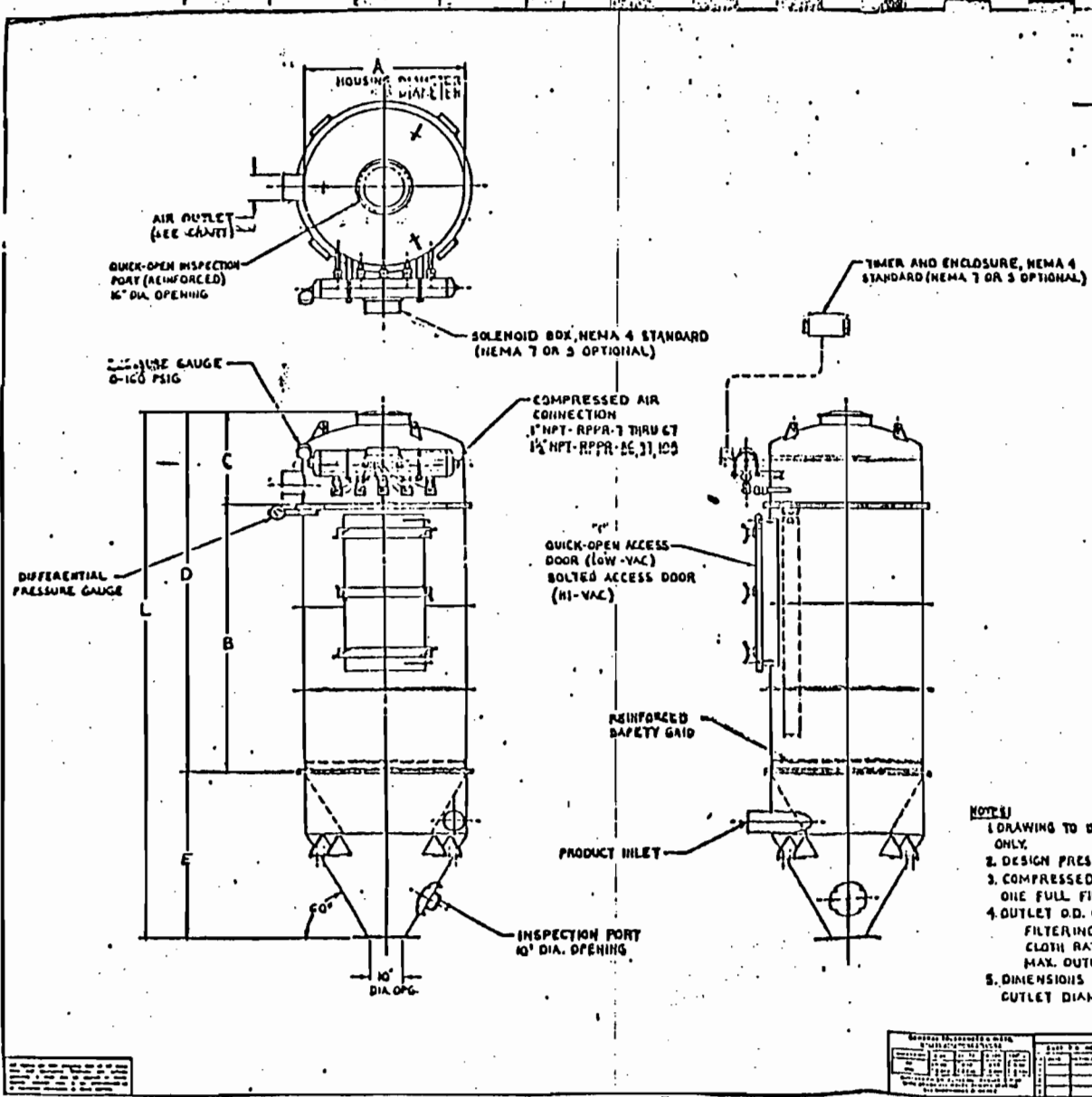
†A separate colored terminal box is used on these units, and should be fitted to the side opposite the controller

ATTACHMENT 11-I

VENDOR DATA
EMISSION POINT NO. D8

BUHLER-MIAG BAGHOUSE

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MODEL No.	DATA					DIMENSIONS (inches)					WEIGHTS		
	INT'L AREA (sq ft)	NO. OF PAGES	DIA. (in)	NO. OF PAGES	NO. OF PAGES	A	B	C	D	E	L	NET WT.	GROSS WT.
RPPR-7/2	17	2	3	14	30	31	20	53	34	61	22-24	3	655
RPPR-7/3	30	7	3	16	30	46	20	65	13	107	22-24	3	126
RPPR-7/4	40	7	3	16	30	27	27	37	31	111	22-24	4	157
RPPR-7/6	62	7	6	15	30	31	22	35	31	132	22-24	5	214
RPPR-10/2	27	10	2	3	2.0	36	33	22	65	33	22-24	3	126
RPPR-10/3	42	10	3	3	2.2	36	45	22	67	33	22-24	4	177
RPPR-10/4	58	10	4	3	2.4	36	57	22	73	33	22-24	5	240
RPPR-10/6	63	10	6	3	2.7	36	81	22	107	33	22-24	6	321
RPPR-10/8	119	10	8	3	3.0	36	105	22	127	33	22-24	7	423
RPPR-14/3	50	14	3	4	3.1	36	45	22	67	33	22-24	4	177
RPPR-14/4	81	14	4	4	3.4	36	57	22	73	33	22-24	5	240
RPPR-14/6	124	14	6	4	3.8	36	81	22	103	33	22-24	6	321
RPPR-14/8	167	14	8	4	4.2	36	105	22	127	33	22-24	7	423
RPPR-16/4	104	16	4	4	4.3	42	57	25	82	43	22-24	6	321
RPPR-16/6	150	16	6	4	4.9	42	81	25	106	43	22-24	8	453
RPPR-16/8	215	16	8	4	5.4	42	105	25	130	43	22-24	10	624
RPPR-24/4	129	24	4	5	5.8	48	57	26	83	53	22-24	7	423
RPPR-24/6	213	24	6	5	6.5	48	81	26	107	53	22-24	9	574
RPPR-24/8	281	24	8	5	7.2	48	105	26	131	53	22-24	10	624
RPPR-30/4	173	30	4	6	7.2	54	57	30	81	59	22-24	8	453
RPPR-30/6	256	30	6	6	8.1	54	81	30	111	59	22-24	10	624
RPPR-30/8	356	30	8	6	9.0	54	105	30	135	59	22-24	12	815
RPPR-41/4	231	41	4	7	8.5	60	57	33	93	63	22-24	10	723
RPPR-41/6	363	41	6	7	11.1	60	81	33	114	63	22-24	12	815
RPPR-41/8	490	41	8	7	12.3	60	105	33	138	63	22-24	14	1096
RPPR-48/6	425	48	6	7	13.0	66	81	34	112	73	22-24	12	815
RPPR-48/8	573	48	8	7	14.4	66	105	34	135	73	22-24	14	1096
RPPR-56/6	496	56	6	8	15.1	72	81	37	118	82	22-24	14	1096
RPPR-56/8	669	56	8	8	16.8	72	105	37	142	82	22-24	16	1407
RPPR-67/6	594	67	6	9	18.1	78	81	40	121	97	22-24	16	1407
RPPR-67/8	800	67	8	9	20.1	78	105	40	145	97	22-24	18	1918
RPPR-86/6	762	86	6	11	23.2	84	81	43	124	102	22-24	18	1918
RPPR-86/8	1027	86	8	11	25.8	84	105	43	148	102	22-24	20	2429
RPPR-97/6	1156	97	6	11	29.1	90	105	44	149	103	22-24	20	2429
RPPR-108/8	1290	108	8	11	32.4	96	105	46	151	113	22-24	22	3236

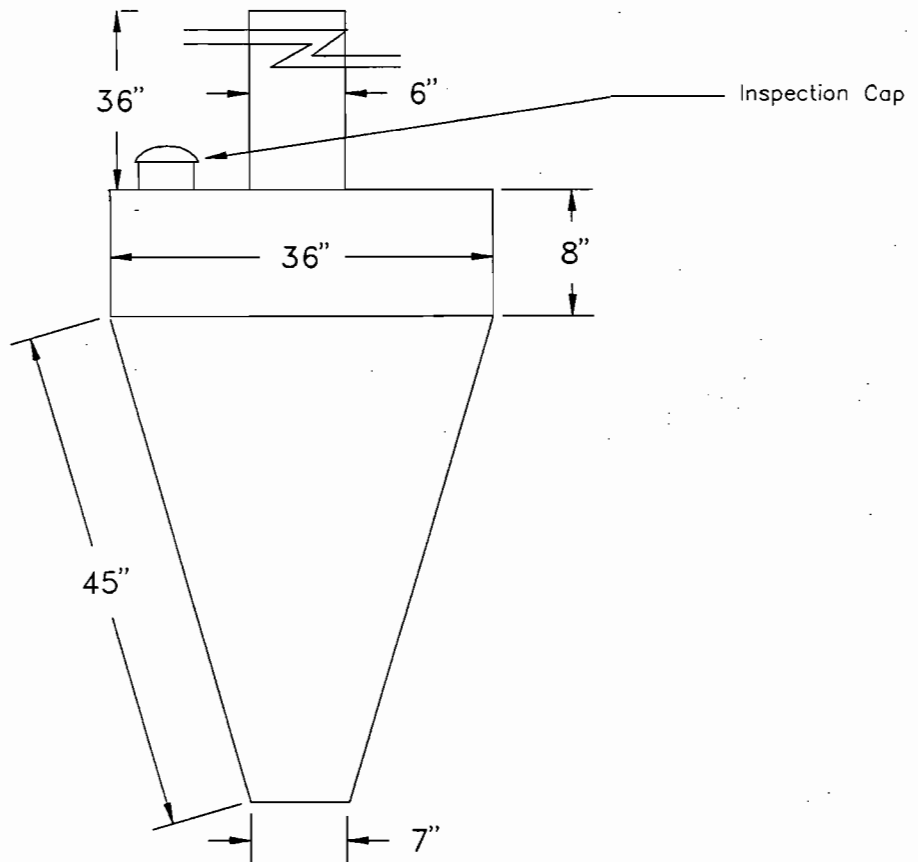
- NOTES:
 1. DRAWING TO BE USED FOR GENERAL ARRANGEMENT ONLY.
 2. DESIGN PRESSURE = 2 FT. MERCURY COLUMN.
 3. COMPRESSED AIR REQUIREMENTS BASED ON ONE FULL FILTER CLEANING CYCLE PER MINUTE.
 4. OUTLET O.D. CALCULATIONS BASED ON 1. FILTERING VELOCITY = 8 FT./MIN. (AIR TO CLOTH RATIO 8:1) MAX. OUTLET VELOCITY = 4000 FT./MIN.
 5. DIMENSIONS E & L ARE BASED ON A PRODUCT OUTLET DIAMETER OF 10".

REVERSE PULSE PRODUCT RECENER	
GENERAL DATA (GENERAL USE)	
BUHLER-MIAO, INC.	
MINNEAPOLIS, MINNESOTA	
AUPP-41152	

ATTACHMENT 11-J

VENDOR DATA
EMISSION POINT NO. D9

BUHLER CYCLONE



RWB Rework airveyor Recycle Cyclone and Stack