Check Sheet

Company Name: MAXWELL HOUSE
Permit Number: AC 16-090096
PSD Number:
Permit Engineer:

Application:

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

Cross References:

- [ ]
- [ ]
- [ ]

Intent:

BLUE PRINTS

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

Correspondence with:

- [ ] EPA
- [ ] Park Services
- [ ] Other

- [x] Proof of Publication ok

- [ ] Petitions - (Related to extensions, hearings, etc.)
- [ ] Waiver of Department Action
- [ ] Other

Final Determination:

- [x] Final Determination ok
- [x] Signed Permit ok
- [ ] BACT Determination
- [ ] Other

Post Permit Correspondence:

- [x] Extensions/Amendments/Modifications
- [ ] Other

In the folder labeled as follows there are documents, listed below, which were not reproduced in this electronic file. That folder can be found in one of the file drawers labeled Supplementary Documents Drawer. Folders in that drawer are arranged alphabetically, then by permit number.

Folder Name: Maxwell House

Permit(s) Numbered:

AC	16	-	090996

Period during which document was received:		Detailed Description
APPLICATION 24 SEPT 1984	1.	36"×24" BLUEPRINT: SOURCE Nº. 1 IN RESPONSE TO DER COMMENT Nº. 6, PROCESS/MECHANICAL DUST COLLECTION ARRANGEMENT. 7TH FLOOR (DRAWING NUMBER: 6555-5403-2)
APPLICATION 24 SEPT 1984	2.	36"×24" BLUEPRINT: SOURCE Nº. 3 IN RESPONSE TO DER COMMENT Nº. 6, PROCESS/MECHANICAL DECHAFFER VENT SYSTEM ARRANGEMENT (DRAWING NUMBER: 6555-5404-2)
APPLICATION 24 SEPT 1984	3.	36"×24" BLUEPRINT: SOURCE Nº. 4 IN RESPONSE TO DER COMMENT Nº. 6, HEAT RECOVERY UNIT RESERVOIR DETAIL (DRAWING NUMBER: 6555-5405-2)

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO: 12-034

ACTION DUE DATE: 12/22/86

		Initial	Date
1.	TO: (NAME, OFFICE, LOCATION)		
2.	~~Steve Smallwood~~ Judy Rogers		
3.	Steve Smallwood		
4.	Clair Fancy		

REMARKS:

DER

DEC 16 1986

BAQM

INFORMATION	
	Review & Return
	Review & File
	Initial & Forward

DISPOSITION	
	Review & Respond
X	Prepare Response
X	For My Signature VCRT
	For Your Signature
	Let's Discuss
	Set Up Meeting
	Investigate & Report
	Initial & Forward
	Distribute
	Concurrence
	For Processing
	Initial & Return

FROM: Mollie Palmer

DATE: 12/12

PHONE

5. A request to modify the permit for Boiler No. 1 to authorize its use to control VOC emissions from the coffee processor condenser (Source No. 6) shall be submitted to BESD within 45 days of receipt of this letter. The request shall include the estimated emissions from Boiler No. 1 before and after it is modified to control the emissions from the coffee processing operation.

A copy of this letter must be attached to the referenced construction permit and shall become a part of that permit.

Sincerely,

/s/Victoria J. Tschinkel

Victoria J. Tschinkel
Secretary

VJT/ps

Attachment

cc: J. Cole
J. Woosley
L. Stebbins

December 23, 1986

Mr. James R. Hellier
Engineering Manager
General Foods Manufacturing Corporation
Maxwell House Division
Post Office Box 2010
Jacksonville, Florida 32203

Dear Mr. Hellier:

In response to your December 10, 1986, letter, the department has reexamined your request to delete the volatile organic compounds (VOC) standard and VOC testing requirements for Emission Point No. 6 in the coffee processing operation. We have concluded that if Boiler No. 1 is operated at 2200 degrees F and has a residence time of 7.64 seconds, as you have stated, the estimated VOC emissions from the coffee processing condensor will be destroyed. Therefore your request, with conditions, is granted. Specific Conditions Nos. 2 and 5 of construction permit No. AC 16-90996 are modified as follows:

From:

2. The allowable volatile organic compound emission rate from the bean processor vent, Source Number 6, shall not exceed 0.93 pounds per hour or 3.91 tons per year.
5. Compliance with the emission limits of volatile organic compounds set forth in Specific Condition No. 2 shall be demonstrated by EPA Method 25, 40 CFR 60, Appendix A, or other methods approved by the department.

To:

2. The bean processor shall not be operated unless the condenser (Source No. 6) is functioning properly with no vents except to Boiler No. 1, and Boiler No. 1 is operating.

DOCUMENT SUMMARY

OK
12/22/86

Library:
Title: JAMES HELLIER 12-034
Document ID:
Author: Willard Hanks
Operator: Judy Rogers

Comments:

Number of Copies: 1
From Page: 1 To Page: 1
Starting Print Date/Time: 12/22/86 3:44

Notify U99 on System VS85A

STATISTICS

OPERATION	DATE	TIME	WORKTIME	KEYSTROKES
Created	12/22/86	10:36	:24	650
Revised	12/22/86	14:39	:10	113
Last Retrieved	/ /	:	from:	
Last Archived	/ /	:	to:	

Total Pages: 1
Total Worktime: :58
Total Keystrokes: 2451

December 22, 1986

Certified Mail - Return Receipt Requested

Mr. James R. Hellier, Engineering Manager
General Foods Manufacturing Corporation
Maxwell House Division
Post Office Box 2010
Jacksonville, Florida 32203

Dear Mr. Hellier:

RE: Modification of Conditions - Permit No. AC 16-90996

In response to your December 10, 1986, letter, the department has reexamined your request to delete the volatile organic compounds (VOC) standard and VOC testing requirements for Emission Point No. 6 in the coffee processing operation. We have concluded that if Boiler No. 1 is operated at 2200 degrees F and has a residence time of 7.64 seconds, as you have stated, the estimated VOC emissions from the coffee processing condensor will be destroyed. Therefore your request, with conditions, is granted. Specific Conditions Nos. 2 and 5 of construction permit No. AC 16-90996 are modified as follows:

From:

2 The allowable volatile organic compound emission rate from the bean processor vent, Source Number 6, shall not exceed 0.93 pounds per hour or 3.91 tons per year.

5. Compliance with the emission limits of volatile organic compounds set forth in Specific Condition No. 2 shall be demonstrated by EPA Method 25, 40 CFR 60, Appendix A, or other methods approved by the department.

To:

2. The bean processor shall not be operated unless the condenser (Source No. 6) is functioning properly with no vents except to Boiler No. 1, and Boiler No. 1 is operating.

5. A request to modify the permit for Boiler No. 1 to authorize its use to control VOC emissions from the coffee processor condenser (Source No. 6) shall be submitted to BESD within 45 days of receipt of this letter. The request shall include the estimated emissions from Boiler No. 1 before and after it is modified to control the emissions from the coffee processing operation.

A copy of this letter must be attached to the referenced construction permit and shall become a part of that permit.

Sincerely,

Victoria J. Tschinkel
Secretary

VJT:jr

attachment: GF December 10, 1986 letter

cc: J. Cole
J. Woosley
L. Stebbins

Steve Smith
dir. resp, VP
sign

RECEIVED
DEC 12 1986
Office of the Secretary

GENERAL FOODS MANUFACTURING CORP. / P. O. Box 2010, Jacksonville, FL 32203
MAXWELL HOUSE DIVISION

December 10, 1986

Ms. Victoria J. Tschinkel, Secretary
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Jacksonville, Florida 32301-8241

DER
DEC 16 1986
BAQM

Subject: Modification of Specific Conditions
Permit No. AC16-90996
Maxwell House Division
Jacksonville, Florida

Re: (1) Letter from V. J. Tschinkel, FDER, to J. R. Hellier, Maxwell House, dated 11/20/86

(2) Letter from J. R. Hellier, Maxwell House, to C. H. Fancy, FDER, dated 6/26/86

Dear Ms. Tschinkel:

We have reviewed your letter of November 20, 1986 and continue to be concerned with the language of Specific Conditions No. 2 and No. 5. We are convinced that Specific Condition No. 2, the allowable emission limit for VOC's, and Specific Condition No. 5, the testing procedure for VOC's, should be deleted for the following reasons:

(1) Emission Point No. 6 is no longer a source. The small amounts of non-condensible vapors (mostly entrained air) from the condenser are ducted to Boiler No. 1 where the temperature is 2200°F and the residence time is 7.64 seconds. Due to the high temperatures and the unusually long residence time, virtually all vapors from the condenser are incinerated and no emissions are vented to the atmosphere. At no time will the subject permitted source operate unless Boiler No. 1 is operational. The boiler must be operational to produce steam for this process.

(2) Specific Condition No. 5, as revised in Reference 1, requires compliance with EPA Method 25 testing if visible emissions from Boiler No. 1 exceeds 5% opacity. However, Permit No. A016-104639, Boiler No. 1 (Expiration Date June 30, 1991), allows 20% opacity for visible emissions because the boiler uses a combination of fuels including coffee grounds and chaff.

Since the very small amount of organic vapors from the condenser is destroyed in the boiler, we respectfully request that Specific Conditions No. 2 and No. 5 be deleted as no longer applicable.

If you have any questions regarding this request, please feel free to call me or our consultant, Lloyd Stebbins, Environmental Science and Engineering, at (904) 739-2007.

Very truly yours,

for

James R. Hellier
Engineering Manager

JRH/k

cc: L. H. Stebbins, P.E., ESE
Johnny Cole, FDER, N.E. District
Jerry Woosley, BESD

P 408 532 097

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. James R. Hellier	
Street and No.	
P.O., State and ZIP Code	
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 12/4/86	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 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 service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr. James R. Hellier
Maxwell House Div., Gen. Foods
P. O. Box 2010
Jacksonville, FL 32203

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number: P 408 532 097

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery: DEC 8 1986

8. Addressee's Address *(ONLY if requested and fee paid)*

DOMESTIC RETURN RECEIPT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

12-17-86
Maxwell House objected to these changes. Permit probably will be modified again.

November 20, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. James R. Hellier, Engineering Manager
General Foods Manufacturing Corporation
Maxwell House Division
Post Office Box 2010
Jacksonville, Florida 32203

Dear Mr. Hellier:

Re: Modification of Conditions - Permit No. AC 16-90996

The department has reviewed your letter requesting the VOC emission standard and testing requirement in the referenced construction permit for your coffee processing operation be deleted. Because this area is designated nonattainment for ozone, the department will not delete the VOC standard for this source. However, the department will waive the Method 25 compliance tests for VOC if the source is in compliance with the visible emissions standard of 5 percent opacity. Specific Condition No. 5 is modified as follows:

From:

5. Compliance with the emission limits of volatile organic compounds set forth in specific condition 2 shall be demonstrated by EPA Method 25, 40 CFR 60, Appendix A, or other methods approved by the department.

To:

5. Compliance with the emission limits for volatile organic compounds set forth in Specific Condition No. 2, as determined by EPA Method 25, 40 CFR 60, Appendix A, or other methods approved by the department, may be required if visible emissions from Boiler No. 1 exceeds 5 percent opacity.

A copy of this letter must be attached to the referenced construction permit and shall become a part of that permit.

Sincerely,

Victoria J. Tschinkel

Victoria J. Tschinkel
Secretary

VJT/ks

cc: J. Cole
J. Woosley
L. Stebbins

attachment

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Loctn: _____
To: _____ Loctn: _____
To: _____ Loctn: _____
From: _____ Date: _____

TO: Victoria J. Tschinkel

FROM: C. H. Fancy, Deputy Chief, BAQM

DATE: November 20, 1986

SUBJ: Modification of Conditions - Maxwell House

Attached for your approval and signature is a letter that will modify the testing requirement in a construction permit issued for Maxwell House's coffee processing operation in Jacksonville, Florida.

The bureau recommends this modification be approved.

CHF/WH/s

attachment: letter

GENERAL FOODS MANUFACTURING CORP. / *P. O. Box 2010, Jacksonville, FL 32203*

MAXWELL HOUSE DIVISION

June 26, 1986

Mr. C. H. Fancy, P.E., Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Subject: Request for Permit Modification
Construction Permit AC16-90996
Coffee Processing
Maxwell House Division of General Foods Corporation

Dear Mr. Fancy:

We respectfully request a modification of the above referenced permit. The emissions from the condenser vent, Emission Point No. 6, are ducted to Boiler No. 1. Since the temperature in the boiler is 2200°F and the residence time is 7.64 seconds. VOC's ducted from Point No. 6 are incinerated and no emissions occur.

Therefore, Specific Condition 2, the allowable emission limit for VOC's, and Specific Condition 5, the testing procedure for VOC's, are not applicable. It is therefore, respectfully requested that the subject permit be modified by deleting specific Conditions 2 and 5.

We have appreciated your prompt assistance in these matters. If you have any further questions, please don't hesitate to call me or our consultant, Lloyd H. Stebbins, Environmental Science and Engineeirng, Inc., Jacksonville at (904)739-2007.

Very truly yours,

James R. Hellier
Engineering Manager

/ma

GENERAL FOODS MANUFACTURING CORP. / *P. O. Box 2010, Jacksonville, FL 32203*

MAXWELL HOUSE DIVISION

June 27, 1986

Mr. Don Bayly, Division Chief
Bio-Environmental Services
515 West Sixth Street
Jacksonville, Florida 32206

Subject: Operating Permit AO16-110490
Coffee Processing
Maxwell House Division, General Foods Corporation
Jacksonville, Florida

Dear Mr. Bayly:

We recently reviewed the operating permit and discussed the Specific Conditions with Jerry Woosley. As discussed, we are requesting a modification to Specific Conditions 6 and 8. Since the emissions from Point No. 18 on the Operating Permit (Source No. 5 on the Flow Diagram) are less than one ton per year, this source should be reclassified RACT Exempt.

The construction permit (AC16-90996) for this process previously recognized this source as RACT exempt. Specific Condition 15 of the construction permit states: "Since the potential particulate matter emission from Source Number 5, the bunkers, are less than one ton per year, Source Number 5 is exempt from control requirements, FAC Rule 17-2.650(2)(b)3. Also, Specific Condition 7 on the Operating Permit lists FAC 17-2.650(2)(b)3 as the emission limiting rule for Point No. 18. Therefore, on this basis, it is requested that this source be recognized as exempt from RACT requirements and the allowable emissions listed in Specific Condition 8 be changed to 0.236 lbs/hr. + 0.99 T/yr.

We have separately requested and been granted an extension of time to file a petition for an Administrative Hearing. The extension (OGC File No. 86-0592), was granted on June 3, 1986 and establishes a deadline of June 26, 1986 to resolve these items. A request to further extend the time to file a petition for an Administrative Hearing has been filed and is expected to be granted.

We have appreciated your prompt assistance in these matters. If you have any further questions, please don't hesitate to call me or our consultant, Lloyd H. Stebbins, Environmental Science and Engineering, at (904)739-2007.

Very truly yours,

James R. Hellier
Engineering Manager

/ma

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

August 13, 1986

Mr. Jim Hellier
General Foods Corporation
Maxwell House Division
P. O. Box 2010
Jacksonville, FL 32203

Re: Coffee Processing, Permit AO16-110490

Dear Mr. Hellier:

Receipt of the June 26 and 27, 1986 letters pertaining to the captioned permit is acknowledged. Upon receipt of the revised construction permit (AC16-90996) concerning the VOC testing requirements, the captioned operation permit shall be revised accordingly.

Please direct further questions concerning this matter to the undersigned.

Very truly yours,

Jerry E. Woosley
Associate Pollution Control Engineer

cc: Mr. Bill Stewart, P.E., DER
BESD File 1820 Q

JEW/bgm

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division

August 15, 1985

Mr. James R. Hellier, Engineering Manager
Maxwell House Division
General Foods
735 East Bay Street
Jacksonville, FL 32202

Re: Green Bean Steamer and Dryer, AC16-90996

Dear Mr. Hellier:

Further to the visit by Mr. Bill Gaston and me to your facility last week, it is our opinion that source No. 4, consisting of emissions from the dryer, cannot be adequately tested in the present exhaust configuration. I have attached a portion of Federal Reference Method 1, and as you can see, the exhaust vent does not allow for testing at least two duct diameters downstream, or at least a half diameter upstream, from any flow disturbance.

It will be necessary to modify the exhaust duct to conform to these minimum criteria in order to conduct a test. The closer that the test location comes to the criteria of eight diameters downstream and two upstream, the better the site and the fewer number of traverse points required.

The exhaust modification can be either temporary or permanent, at your discretion. In deciding, you should be aware that due to the source location in a particulate non-attainment area, at least annual testing will probably be required. When you or your consultant have decided on a modified exhaust configuration, please contact this agency for review and approval, prior to beginning of the construction.

I am pleased to tell you that Mr. Jerry Woosley and I discussed the test requirements with Mr. Ed Svec, FDER Permitting Engineer, for this permit, and it was agreed that because of the very low emissions and the difficulty of testings, visible emissions may be substituted for the particulate tests on sources Nos. 3 and 5. Source No. 3 should be tested for VOC emissions, as per the permit requirements.

If you have any questions concerning this, please telephone me or Khurshid Mehta.

Very truly yours,

Wayne E. Tutt
Associate Engineer

Enclosure

cc: Ed Svec, FDER, BAQM
John Brown, DER

WET/bgm

DER
AUG 19 1985
BAQM

PS Form 3811, July 1983

SENDER: Complete items 1, 2, 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 service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr. Robert T. Marek
Maxwell House Div., Gen. Foods
735 East Bay Street
Jacksonville, FL 32202

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
0158658

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery
FEB 21 1985

8. Addressee's Address (ONLY if requested and fee paid)

DOMESTIC RETURN RECEIPT

No. 0158658

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO Mr. Robert T. Marek			
STREET AND NO.			
P.O., STATE AND ZIP CODE			
POSTAGE			$
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		¢
	OPTIONAL SERVICES	SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
		RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES			$
POSTMARK OR DATE 2/18/85			

PS Form 3800, Apr. 1976

See Specific
Card # 3
Final 02/14/85
Prelim 11/30/84

31/16/0004/14 - 19

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

February 14, 1985

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Robert T. Marek
Plant Manager
Maxwell House Division, General Foods
735 East Bay Street
Jacksonville, Florida 32202

Dear Mr. Marek:

Enclosed is Permit Number AC 16-090996 dated February 12, 1985, to Maxwell House Division, General Foods issued pursuant to Section 403, Florida Statutes.

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

Sincerely,

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

CHF/pa

Enclosure

cc: Lloyd Stebbins, P.E.
Jerry Woosley
John Brown

Final Determination

Maxwell House Division, General Foods
Duval County
Jacksonville, Florida

Coffee Processing

Permit Number:
AC 16-090996

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

February 8, 1985

Final Determination

Maxwell House Division of General Food's application for a permit to construct a coffee processing line at their facility in Jacksonville, Duval County, Florida, has been reviewed by the Bureau of Air Quality Management. Public Notice of the department's intent to issue the permit was published in the Jacksonville Journal on December 18, 1984.

Copies of the preliminary determination have been available for public inspection at the department's Northeast District office in Jacksonville, the Jacksonville Bio-Environmental Services Division office in Jacksonville, and the Bureau of Air Quality Management office in Tallahassee.

Comments on the proposed permit were received from Mr. Lloyd H. Stebbins in behalf of Maxwell House Division.

Mr. Stebbins requests that Source Number 5, storage bunkers with cyclone control, be exempt from the requirements of RACT for particulate matter, FAC Rule 17-2.650(2)(b)3.

FAC Rule 17-2.650(2)(b)3 exempts particulate matter sources located within a nonattainment area or area of influence from the provisions of this section if the total allowable particulate matter emissions are less than one ton per year. The request is granted and the following change to the Specific Conditions shall be made:

Specific Condition No. 3 shall be changed to remove Source Number 5 from the list of allowable emission rates.

An additional Specific Condition shall be added:

15. Since the potential particulate matter emissions from Source Number 5, the bunkers, are less than one ton per year, Source Number 5 is exempt from control requirement, FAC Rule 17-2.650(2)(b)3.

The final action of the department will be to issue the permit to construct with the changes discussed above.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Maxwell House Division
General Foods
735 East Bay Street
Jacksonville, Florida 32202

Permit Number: AC 16-90996
Expiration Date: November 30, 1985
County: Duval
Latitude/Longitude: 30° 19' 27" N/
81° 39' 00" W
Project: Coffee Processing

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility show 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 construction of a coffee processing facility. Construction shall be in accordance with the attached permit application and additional information except as otherwise noted on pages 5, 6, and 7, specific conditions.

Attachments are as follows:

1. Application to Construct an Air Pollution source, DER Form 17-1.202(1).
2. C.H. Fancy's letter, dated September 6, 1984.
3. L.H. Stebbins' letter, dated September 21, 1984.
4. G.L. Whitmer's letter, dated October 15, 1984.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number: AC 16-90996
Expiration Date: November 30, 1985

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 acknowledgement 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.

GENERAL CONDITIONS:

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.

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 copying 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 noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

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 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. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD).
( ) Compliance with New Source Performance Standards.

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.

GENERAL CONDITIONS:

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. The hours of operation shall not exceed 8,400 hours per year.

2. The allowable volatile organic compounds emission rate from the bean processor vent, source number 6, shall not exceed 0.93 pounds per hour or 3.91 tons per year.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number: AC 16-90996
Expiration Date: November 30, 1985

SPECIFIC CONDITIONS:

3. The allowable particulate matter emission rates shall not exceed (0.03 grains per day standard cubic foot):

	Location	Pounds per hour	Tons per year
Source Number 1	Surge Bins	0.51	2.14
Source Number 2	Separator	0.26	1.09
Source Number 3	Centrifugal Washer	0.53	2.23
Source Number 4	Dryer	6.28	26.38

4. Visible emissions shall not exceed 5 percent opacity, demonstrated in accordance with DER Method 9 (FAC Rule 17-2.700(6)(a)9.).

5. Compliance with the emission limits of volatile organic compounds set forth in specific condition 2 shall be demonstrated by EPA Method 25, 40 CFR 60, Appendix A, or other methods approved by the department.

6. Compliance with the particulate matter emission limits set forth in specific condition 3 shall be demonstrated by EPA Method 5, 40 CFR 60, Appendix A, or other methods approved by the department.

7. A visible emissions test indicating no visible emissions (5 percent opacity) may be submitted in lieu of a particulate stack test for materials handling sources, sources number 1 and 2, subject to Section 17-2.650(2)(c)11. where the source is equipped with a baghouse, FAC Rule 17-2.700(2)(a)6.

8. There shall be no objectionable odors, FAC Rule 17-2.620.

9. The coffee bean processing rate shall not exceed 15,000 pounds per hour.

10. Compliance tests shall be run at 90-100% rated capacity.

11. Sampling facilities, source sampling and reporting shall be in accordance with FAC Rule 17-2.700 and 40 CFR 60, Appendix A.

12. Compliance tests shall be submitted to DER's Northeast District Office and Jacksonville's Bio-Environmental Services Division Office within 45 days after completion of the tests.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number AC 16-90996
Expiration Date: November 30, 1985

SPECIFIC CONDITIONS:

13. Fifteen (15) days prior notification of the compliance tests to DER's Northeast District Office and Jacksonville Bio-Environmental Services Division Office is required.

14. After satisfactory completion of the initial compliance tests and prior to ninety (90) days before the expiration of this permit, a complete application for an operating permit shall be submitted to the Jacksonville Bio-Environmental Services Division Office. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit. The department may extend the expiration date of this permit, as authorized by FAC Rule 17-2.210(1).

15. Since the potential particulate matter emissions from Source Number 5, the bunkers, are less than one ton per year, Source Number 5 is exempt from control requirements, FAC Rule 17-2.650(2)(b)3.

Issued this 12th day of Feb, 1985

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Victoria J. Tschinkel

FROM: Clair Fancy

DATE: February 11, 1985

SUBJ: Approval of Attached Air Construction Permit

Attached for your approval and signature is one Air Construction Permit for Maxwell House Division, General Foods. This permit is for the construction of a coffee processing line at the applicant's existing facility in Jacksonville, Duval County, Florida.

Day 90, after which the permit would be issued by default, is February 17, 1985.

The Bureau recommends your approval and signature.

CF/pa

Attachments

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

CITY OF JACKSONVILLE, FLORIDA

January 10, 1985

Mr. Ed Svec, Engineer
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blairstone Road
Tallahassee, Florida 32301

Re: Green Coffee Processing
Permit AC-090996

Dear Mr. Svec:

Maxwell House Coffee has requested that the following sources be transferred to the proposed Permit AC-090996, Green Coffee processing:

(1) Bunker cyclone A-1 and the respective Bunker
(2) Bunker cyclone B-1 and the respective Bunker
(3) Bunker cyclone C-1 and the respective Bunker

Attached is a copy of the request for this change along with additional clarification of the cyclones and bunkers. A revision to Permit A016-31485 reflecting this change is also attached.

If you should have any questions concerning these permit changes, please feel free to call me at 633-3303 (Suncom 685-3033).

Very truly yours,

Don Summerfield
Assistant Engineer

DS/vj
Attachment

cc: Mr. Jerry Owens - DER
cc: BESD - File/1820-E and 1820-Q

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT

3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207
(904) 396-6959

January 11, 1985

Mr. Robert T. Marek, Plant Manager
General Foods Corporation
Maxwell House Division
735 East Bay Street
Jacksonville, Florida 32202

Re: Duval County - AP
Maxwell House Division
Green Bean Bulk Handling Process
Permit AO16-31485

Dear Mr. Marek:

Bio-Environmental Services Division and the Florida Department of Environmental Regulation have approved the following changes to the above captioned permit.

(1) Bunker cyclones A-1, B-1, and C-1 and their respective Bunkers, currently permitted under Permit AO16-31485 for the Green Bean Bulk Handling Process are deleted from that permit and are transferred and included in the proposed Green Coffee Processing Permit AC16-090996.

(2) Bunker cyclones D-3, D-4, D-5 and D-6 and the respective Bunkers are included in Permit AO16-31485, Green Bean Bulk Handling Process.

This letter shall be attached to and becomes part of the subject permit.

If you have any questions concerning this matter, please contact Bio-Environmental Services Division at (904)633-3303.

Very truly yours,

Donald C. Bayly, Chief
BESD

Northeast District Manager
Northeast District, DER

DCB/GDD/DS/vj

cc: BESD - File/1820-E

GENERAL FOODS MANUFACTURING CORP. / *P. O. Box 2010, Jacksonville, FL 32203*
MAXWELL HOUSE DIVISION

October 22, 1984

Mr. Jerry Woosley
Pollution Control Engineer Assistant
Department of Health, Welfare &
Bio-Environmental Services
Air Pollution Control
515 West 6th Street
Jacksonville, Fl. 32206

Subject: Maxwell House Division
Revision to Green Bean
Bulk Handling Process
Permit No. A016-31485

Dear Mr. Woosley:

The Maxwell House construction permit application for Green Coffee Processing is presently under review by DER in Tallahassee.

We are requesting an amendment to the existing Bulk Green Handling Permit to include the following:

1. That bunker cyclones A-1, B-1 and C-1 presently permitted under Permit No. A016-31485 be deleted as they are covered by the Green Coffee Processing Permit application.

2. That bunker cyclones D-3, D-4, D-5 and D-6 be added to Permit No. A016-31485.

The Bulk Green Handling Permit will now cover 21 bunkers, and four (4) bag houses. We will continue to transport coffee through three (3) existing airveyors to the 21 bunkers. Since the total pounds per hour will remain the same, the emissions will not increase. We request that the RACT exemption be continued.

Please call me should you required additional information.

Very truly yours,

Robert T. Marek,
Plant Manager

Mehta
Woosley
(3)

GENERAL FOODS MANUFACTURING CORP. / *P. O. Box 2010, Jacksonville, FL 32203*

MAXWELL HOUSE DIVISION

November 28, 1984

Mr. Jerry Woosley
Pollution Control Engineer Assistant
Department of Health, Welfare
and Bio-Environmental Services
Air Pollution Control
515 West 6th Street
Jacksonville, FL 32206

Subject: Maxwell House Division
Revision to Green Bean
Bulk Handling Process
Permit No. A016-31485

Dear Mr. Woosley:

Attached please find the requested revisions to the subject permit. These revisions are as follows:

1. Green Bean Bulk Handling Process - Flow diagram revised to show 21 bunkers instead of the presently permitted 20 bunkers.

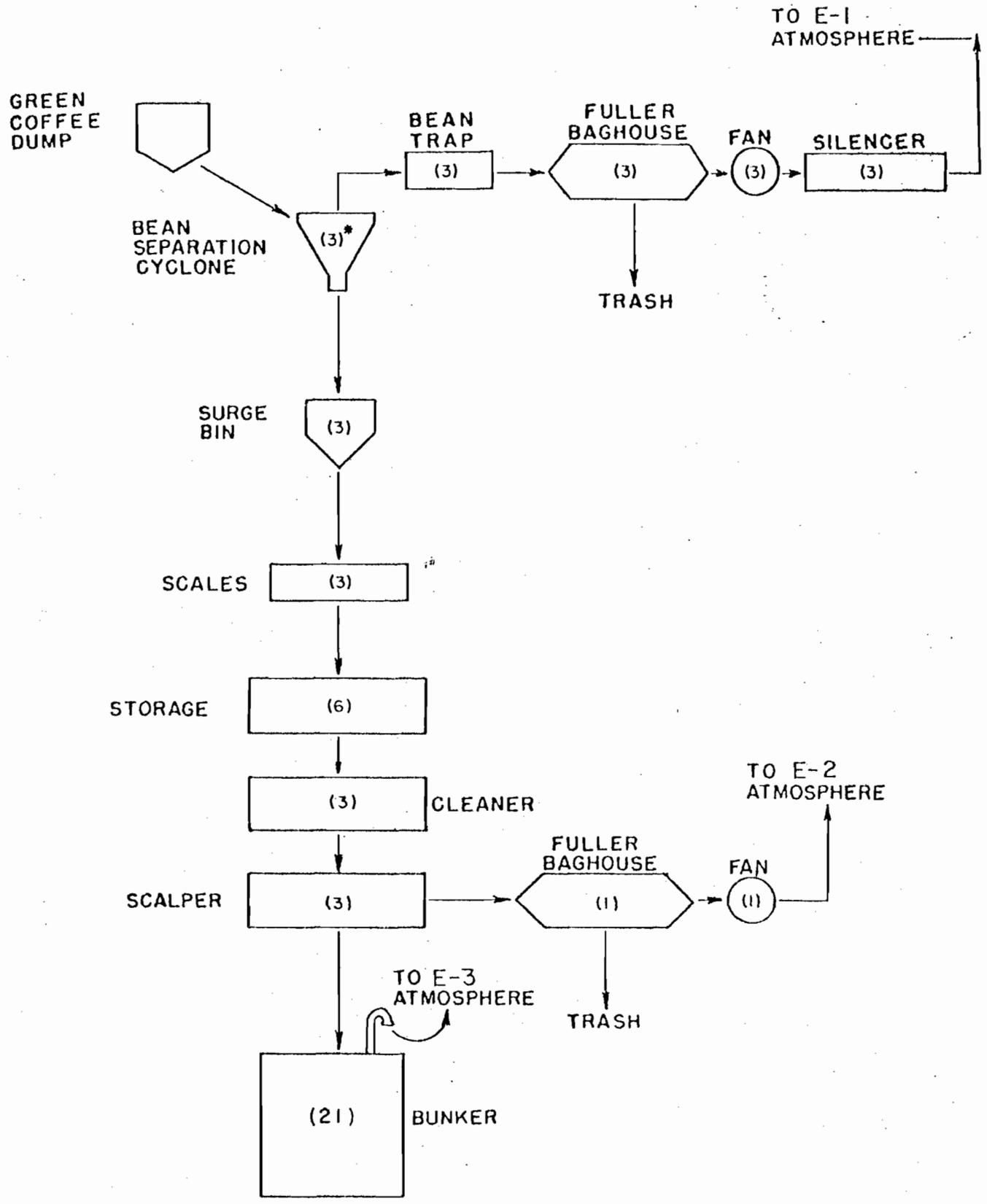
2. Location of Discharge Points - Green Bean Bulk Handling Process - Revised to show bunker cyclones transferred to Green Coffee Processing Permit Application and bunker cyclones to be added to the Green Bean Bulk Handling Process Permit as stated in the October 22, 1984, letter to you from Mr. Marek of Maxwell House. This sheet was also revised to show which bunkers are equipped with cyclones.

Should you require additional information, please call me.

Very truly yours,

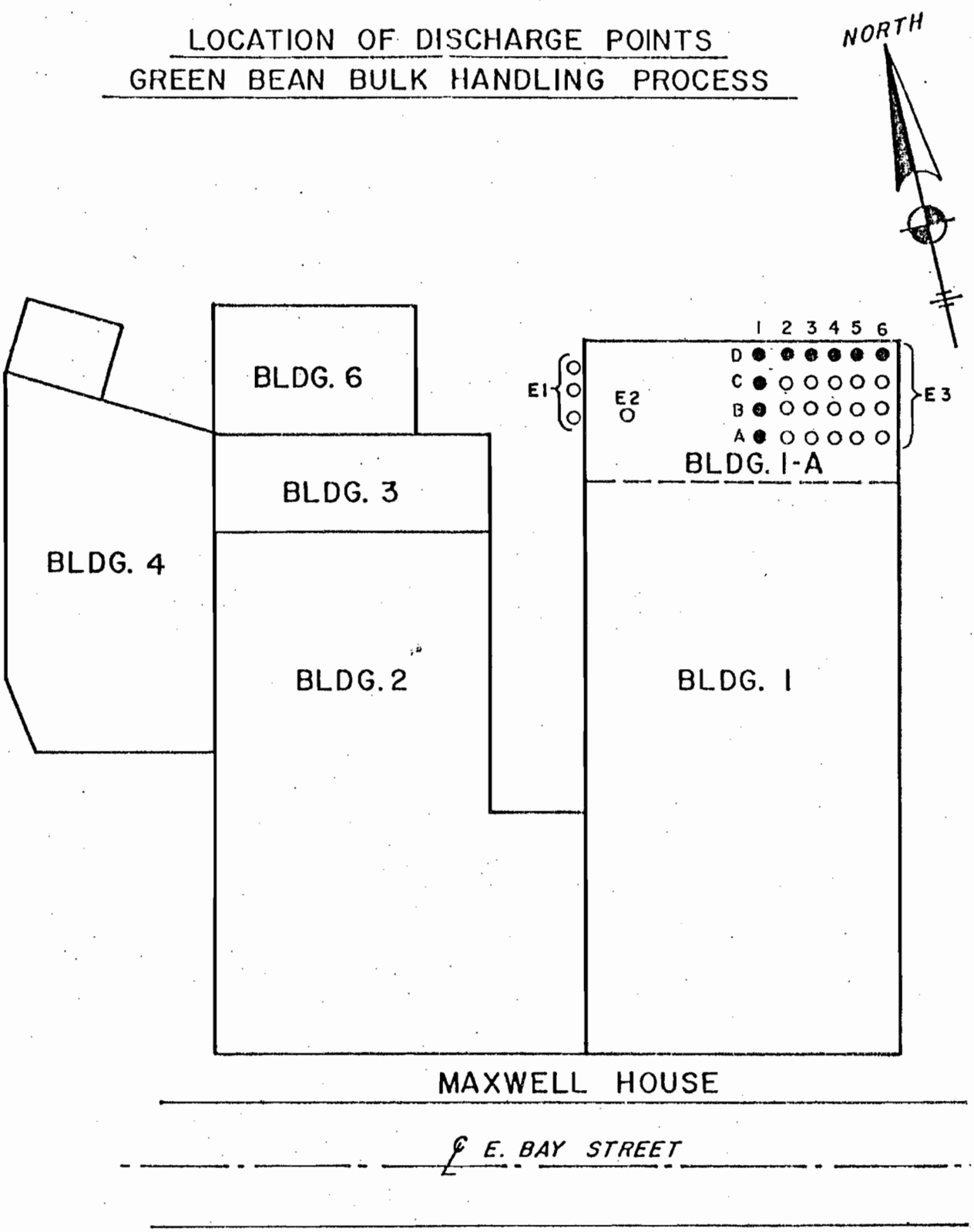
James R. Hellier
Engineering Manager

GREEN BEAN BULK HANDLING PROCESS



* (3) Denotes Number of Separate Units

LOCATION OF DISCHARGE POINTS
GREEN BEAN BULK HANDLING PROCESS



Notes:

- ● Bunkers equipped with cyclones.
- o Bunkers not equipped with cyclones.

Bunkers A-1, B-1 and C-1 are now part of the permit application for Coffee Processing (Green Bean Steaming). All other bunkers remain with the Green Bean Bulk Handling Process.

GENERAL FOODS MANUFACTURING CORP. / *P. O. Box 2010, Jacksonville, FL 32203*

MAXWELL HOUSE DIVISION

CERTIFIED MAIL -
RETURN RECEIPT REQUESTED

December 21, 1984

C. H. Fancy, P. E.
Deputy Chief
Bureau of Air Quality Management
Dept. of Environmental Regulations
2600 Black Stone Road
Tallahassee, Florida 32301-8241

Dear Mr. Fancy:

Pursuant to the instructions in your letter of December 13, 1984, attached is Proof of Publication of the "Notice of Proposed Agency Action" in the Jacksonville Journal on December 18, 1984.

Sincerely,

James R. Hellier,
Engineering Manager

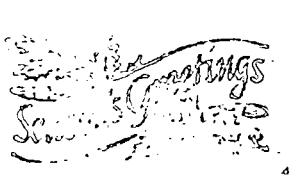
JRH/cm
Enclosure

cc: R. Marek
L. Stebbins

MAXWELL HOUSE DIVISION
General Foods Manufacturing Corporation
P. O. Box 2010, Jacksonville, Fla. 32203

CERTIFIED
P 628 447 181
MAIL

RETURN RECEIPT REQUESTED



C. H. Fancy, P. E.
Deputy Chief
Bureau of Air Quality Management
Dept. of Environmental Regulations
2600 Black Stone Road
Tallahassee, Florida 32301-8241

The Florida Times-Union Jacksonville Journal

FLORIDA PUBLISHING COMPANY

Publishers

JACKSONVILLE, DUVAL COUNTY, FLORIDA

STATE OF FLORIDA }
COUNTY OF DUVAL }

Before the undersigned authority personally appeared George A. Dan

who on oath says that he is

Retail Advertising Manager of The Florida Times-Union, and

Jacksonville Journal, daily newspapers published at Jacksonville in Duval County,

Florida; that the attached copy of advertisement, being a

Legal Notice

in the matter of Notice of Proposed Agency Action

in the Court,

was published in The Jacksonville Journal

in the issues of Dec. 18

Affiant further says that the said The Florida Times-Union and Jacksonville Journal are each newspapers published at Jacksonville, in said Duval County, Florida, and that the said newspapers have each heretofore been continuously published in said Duval County, Florida, The Florida Times-Union each day, and Jacksonville Journal each day except Sundays, and each 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 preceding 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 18th day of December A.D. 19 84

Frances E. Collins

Notary Public,
State of Florida at Large.

My Commission Expires

NOTARY PUBLIC STATE OF FLORIDA

DA 444

State of Florida
Department of Environmental Regulation
Notice of Proposed Agency Action
on Permit Application

The Department of Environmental Regulation gives notice of its intent to issue a permit to Maxwell House Division, General Foods to construct a coffee processing line located at their existing facility at 735 East Bay Street, Duval County, Jacksonville, Florida. A determination of best available control technology (BACT) was not required.

Persons 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 conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing 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.

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 preliminary statement. Therefore, persons who may not object to the proposed agency action may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009, Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

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

Department of Environmental Regulation
St. Johns River Subdistrict
3426 Bills Road
Jacksonville, Florida 32207

Duval County Dept. of Health,
Welfare, & Bio-Environmental Services
Division of Bio-Environmental Services
515 West 6th Street
Jacksonville, Florida 32206

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Any person may send written comments on the proposed action to Mr. Bill Thomas at the department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the department's final determination.

DER
DEC 26 1984
BAQM

REYNOLDS, SMITH AND HILLS

ARCHITECTS · ENGINEERS · PLANNERS

INCORPORATED

December 19, 1984

Bill Thomas, P.E.
Florida Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: Maxwell House Division
Coffee Processing Permit Application
Permit No. AC16-090996
A.E.P. No. 84283 000

Dear Mr. Thomas:

Pursuant to a telephone conversation between Mr. George Whitmer, Reynolds, Smith and Hills, and Mr. Ed Svec, Department of Environmental Regulation, on December 19, 1984, we respectfully request an exemption from the requirements of RACT as provided in Paragraph 17-2.650 (2) (b) 3, FAC, for source number 5. This source is subject to this exemption as a result of the extremely small total allowable emission rate (0.34 tons per year).

Should you have any questions regarding this request, please contact me at (904) 739-2000.

Very truly yours,

Lloyd H. Stebbins, P.E. Head
Chemical and Process Department
Environmental Engineering Division

LHS:bb

cc: James R. Hellier
Ed Svec ✓

DER
JAN 3 1985
BAQM

No. 0155789

RECEIPT FOR CERTIFIED MAIL

**NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL**

(See Reverse)

SENT TO
Robert T. Marek

STREET AND NO.
735 East Bay Street

P.O., STATE AND ZIP CODE
Jacksonville,FL 32202

POSTAGE			$
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		¢
	OPTIONAL SERVICES: SPECIAL DELIVERY		¢
	OPTIONAL SERVICES: RESTRICTED DELIVERY		¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES			$
POSTMARK OR DATE			

PS Form 3800, Apr. 1976

PS Form 3811, Jan. 1978

● SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
   - ☒ Show to whom and date delivered..... ¢
   - ☐ Show to whom, date and address of delivery..... ¢
   - ☐ RESTRICTED DELIVERY
     Show to whom and date delivered..... ¢
   - ☐ RESTRICTED DELIVERY.
     Show to whom, date, and address of delivery. $ ____

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Robert T. Marek
735 East Bay Street
Jacksonville, FL 32202

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	0155789	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY DEC 17 1984 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

JACKSONVILLE, FL GENERAL MAIL FACILITY USPS DEC 17 1984

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-459

File Copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

December 13, 1984

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Robert T. Marek, Plant Manager
Maxwell House Division, General Foods
735 East Bay Street
Jacksonville, Florida 32202

Dear Mr. Marek:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit to construct a coffee processing line at your present facility at 735 East Bay Street, Duval County, Jacksonville, Florida.

Before final action can be taken on your draft permit, you are required by Florida Administrative Code Rule 17-103.150 to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Duval County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice may be grounds for denial of the permit.

Please submit, in writing, any comments which you wish to have considered concerning the department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

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

CHF/rw
Attachments
cc: Lloyd Stebbins, P.E., Reynolds, Smith and Hills ✓
Jerry Woosley, Bio-Environmental Services ✓
Doug Dutton, St. Johns River Subdistrict ✓
Reading File ✓
Ed Svec ✓

State of Florida
Department of Environmental Regulation
Notice of Proposed Agency Action
on Permit Application

The Department of Environmental Regulation gives notice of its intent to issue a permit to Maxwell House Division, General Foods to construct a coffee processing line located at their existing facility at 735 East Bay Street, Duval County, Jacksonville, Florida. A determination of best available control technology (BACT) was not required.

Persons 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 conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitutes a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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 preliminary statement. Therefore, persons who may not object to the proposed agency action may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009, Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

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

Department of Environmental Regulation
St. Johns River Subdistrict
3426 Bills Road
Jacksonville, Florida 32207

Duval County Dept. of Health,
Welfare, & Bio-Environmental Services
Division of Bio-Environmental Services
515 West 6th Street
Jacksonville, Florida 32206

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Any person may send written comments on the proposed action to Mr. Bill Thomas at the department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the department's final determination.

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and

(g) Such other information which the petitioner contends is material.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of an Application for Permit by	)	
Maxwell House Division, General Foods 735 East Bay Street Jacksonville, Florida 32202	)	DER File No. AC 16-90996

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its Intent to Issue, and proposed order of issuance for, a permit pursuant to Chapter 403, Florida Statutes, 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 Division, General Foods, applied on September 6, 1984, to the Department of Environmental Regulation for a permit to construct a coffee processing line at the applicant's existing facility at 735 East Bay Street, Duval County, Jacksonville, 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 applicant was officially notified by the Department that an air construction permit was required for the proposed work.

This intent to issue shall be placed before the Secretary for final action unless an appropriate petition for a hearing pursuant to the provisions of Section 120.57, Florida Statutes, is filed within fourteen (14) days from receipt of this letter or

publication of the public notice (copy attached) required pursuant to Rule 17-103.150, Florida Administrative Code, whichever occurs first. The petition must comply with the requirements of Section 17-103.155 and Rule 28-5.201, Florida Administrative Code (copy attached) and be filed pursuant to Rule 17-103.155(1) in the Office of General Counsel of the Department of Environmental Regulation at 2600 Blair Stone Road, Tallahassee, Florida 32301.

Petitions which are not filed in accordance with the above provisions are subject to dismissal by the Department. In the event a formal hearing is conducted pursuant to Section 120.57(1), all parties shall have opportunity to respond, to present evidence and argument on all issues involved, to conduct cross-examination of witness and submit rebuttal evidence, to submit proposed findings of facts and orders, to file exception to any order or hearing officer's recommended order, and to be represented by counsel. If an informal hearing is requested, the agency, in accordance with its rules of procedure, will provide affected persons or parties or their counsel an opportunity, at a convenient time and place, to present to the agency or hearing officer, written or oral evidence in opposition to the agency's action or refusal to act, or a written statement challenging the grounds upon which the agency has chosen to justify its action or inaction, pursuant to Section 120.57(2), Florida Statutes.

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 proposed agency action. Therefore, persons who may not wish to file a petition, may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Model Rule 28-5.207 at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of

Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahase, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statues.

Executed the 13 day of December, 1984, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

Robert T. Marek, Plant Manager, General Foods
Lloyd Stebbins, P.E., Reynolds, Smith and Hills
Jerry Woosley, Bio-Environmental Services
Doug Dutton, St. Johns River Subdistrict

Technical Evaluation
and
Preliminary Determination

Maxwell House Division, General Foods
Duval County
Jacksonville, Florida

Coffee Processing

Permit Number:
AC 16-090996

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

November 30, 1984

I. Project Description

A. Applicant

Maxwell House Division, General Foods
735 East Bay Street
Jacksonville, Florida 32202

B. Project and Location

The applicant proposes to construct a coffee processing facility. The proposed source will be located within the applicant's existing facility at 735 East Bay Street, Duval County, Jacksonville, Florida. The universal transverse mercator (UTM) coordinates of the source are Zone 17, 437.5 km East and 3354.7 km North.

C. Process and Controls

The coffee beans will be transferred from an existing storage silo to a separator which is controlled by a baghouse. From the separator, the coffee moves through a surge bin to a bucket elevator which is controlled by another baghouse. The bucket elevator moves the coffee beans to a processing unit, to a centrifugal washer, and finally to a dryer. Cyclones will be used as control devices for this phase of the bean processing. From the dryer, the coffee beans are moved through another surge bin to an airveyor, where they are stored in existing bunkers prior to being bulk loaded for shipment. The emissions from the bunkers and loading operation will also be controlled by cyclones.

II. Rule Applicability

The proposed project will be located in Duval County, which is designated as a nonattainment area for the air pollutant, ozone. The project will also be located in the downtown area of Jacksonville which is designated as a nonattainment area for the air pollutant, particulate matter (FAC Rule 17-2.410).

The proposed project will be exempt from the requirements of FAC Rule 17-2.510, New Source Review for Nonattainment Areas, because the emissions increases of particulate matter and volatile organic compounds do not constitute a new major facility in and of themselves and the facility is a minor facility for particulate matter and volatile organic compounds.

The proposed project will be subject to the particulate matter emission limits of FAC Rule 17-2.650(2)(c)11 and FAC Rule 17-2.650(2)(c)12 for Materials Handling, Sizing, Screening, Crushing and Grinding Operations and Miscellaneous Manufacturing

Process Operations. Particulate matter emissions shall not exceed 0.03 grains per dry standard cubic foot and a visible emission of five percent opacity.

The proposed project will also be subject to the General Pollutant Emission Limiting Standards of FAC Rule 17-2.620 for volatile organic compounds, which includes the provision prohibiting objectionable odors.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

The proposed coffee processing project will have six sources of emissions. There will be one source of volatile organic compound emissions and five sources of particulate matter emissions.

Source number 1 will be a baghouse collector which will control particulate matter emissions from two surge bins. The baghouse will be a Flex-Kleen model PVTL-16. The allowable emission rate will be 0.51 pound per hour and 2.14 tons per year.

Source number 2 will also be a baghouse collector which will control particulate matter emissions from a separator. This baghouse will be a Coastal Kinetics Co. model FR7-10. The allowable emission rate will be 0.26 pound per hour and 1.09 tons per year.

Source number 3 is a Carter Day Vent for the centrifugal washer. Emissions from this source will be particulate matter and water vapor. The allowable particulate matter emission rate will be 0.53 pound per hour and 2.23 tons per year.

Source number 4 will be a Ducon model 810 Cyclone which will control particulate matter emissions from the dryer. The allowable emission rate will be 6.28 pounds per hour and 26.38 tons per year.

Source number 5 will be four cyclones which will control particulate matter emissions from three existing storage bunkers and a bulk loading area. Only one cyclone will be in operation at any given time. There will be no multiple loading of bunkers or simultaneous loading of bunkers and bulk loading. The allowable emission rate will be 0.08 pound per hour and 0.34 tons per year.

Source number 6 will be a condensor vent where the emissions will be volatile organic compounds. Emissions from this source

are based on pilot plant testing by Maxwell House Division Research. The emission rate will be 0.93 pound per hour and 3.91 tons per year.

B. Air Quality Analysis

Ambient monitoring or modeling is not required. The proposed project will not prevent reasonable further progress toward attainment.

IV. Conclusion

The emission limits that will be imposed have been determined to be in compliance with all applicable requirements of FAC Rule 17-2. The permitted maximum allowable emission limits should not cause any violation of Florida's ambient air quality standards.

The general and specific conditions listed in the proposed construction permit (attached) will assure compliance with all applicable requirements of FAC Rule 17-2.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

PERMITTEE:
Maxwell House Division
General Foods
735 East Bay Street
Jacksonville, Florida 32202

Permit Number: AC 16-90996
Expiration Date: November 30, 1985
County: Duval
Latitude/Longitude: 30° 19' 27" N/
81° 39' 00" W
Project: Coffee Processing

This permit is issued under the provisions of Chapter(s) 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility show 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 construction of a coffee processing facility. Construction shall be in accordance with the attached permit application and additional information except as otherwise noted on pages 5, 6, and 7, specific conditions.

Attachments are as follows:

1. Application to Construct an Air Pollution source, DER Form 17-1.202(1).
2. C.H. Fancy's letter, dated September 6, 1984.
3. L.H. Stebbins' letter, dated September 21, 1984.
4. G.L. Whitmer's letter, dated October 15, 1984.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number: AC 16-90996
Expiration Date: November 30, 1985

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 acknowledgement 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.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number: AC 16-90996
Expiration Date: November 30, 1985.

GENERAL CONDITIONS:

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.

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 copying 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 noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

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 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. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD).
( ) Compliance with New Source Performance Standards.

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.

GENERAL CONDITIONS:

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. The hours of operation shall not exceed 8,400 hours per year.

2. The allowable volatile organic compounds emission rate from the bean processor vent, source number 6, shall not exceed 0.93 pounds per hour or 3.91 tons per year.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number: AC 16-90996
Expiration Date: November 30, 1985

SPECIFIC CONDITIONS:

3. The allowable particulate matter emission rates shall not exceed (0.03 grains per day standard cubic foot):

	Location	Pounds per hour	Tons per year
Source Number 1	Surge Bins	0.51	2.14
Source Number 2	Separator	0.26	1.09
Source Number 3	Centrifugal Washer	0.53	2.23
Source Number 4	Dryer	6.28	26.38
Source Number 5	Bunkers	0.08	0.34

4. Visible emissions shall not exceed 5 percent opacity, demonstrated in accordance with DER Method 9 (FAC Rule 17-2.700(6)(a)9.).

5. Compliance with the emission limits of volatile organic compounds set forth in specific condition 2 shall be demonstrated by EPA Method 25, 40 CFR 60, Appendix A, or other methods approved by the department.

6. Compliance with the particulate matter emission limits set forth in specific condition 3 shall be demonstrated by EPA Method 5, 40 CFR 60, Appendix A, or other methods approved by the department.

7. A visible emissions test indicating no visible emissions (5 percent opacity) may be submitted in lieu of a particulate stack test for materials handling sources, sources number 1 and 2, subject to Section 17-2.650(2)(c)11. where the source is equipped with a baghouse, FAC Rule 17-2.700(2)(a)6.

8. There shall be no objectionable odors, FAC Rule 17-2.620.

9. The coffee bean processing rate shall not exceed 15,000 pounds per hour.

10. Compliance tests shall be run at 90-100% rated capacity.

11. Sampling facilities, source sampling and reporting shall be in accordance with FAC Rule 17-2.700 and 40 CFR 60, Appendix A.

12. Compliance tests shall be submitted to DER's Northeast District Office and Jacksonville's Bio-Environmental Services Division Office within 45 days after completion of the tests.

PERMITTEE:
Maxwell House Division
General Foods

Permit Number AC 16-90996
Expiration Date: November 30, 1985

SPECIFIC CONDITIONS:

13. Fifteen (15) days prior notification of the compliance tests to DER's Northeast District Office and Jacksonville Bio-Environmental Services Division Office is required.

14. After satisfactory completion of the initial compliance tests and prior to ninety (90) days before the expiration of this permit, a complete application for an operating permit shall be submitted to the Jacksonville Bio-Environmental Services Division Office. The permittee may continue to operate in compliance with all terms of this construction permit until its expiration date or the issuance of an operating permit. The department may extend the expiration date of this permit, as authorized by FAC Rule 17-2.210(1).

Issued this_____day of_____, 19___

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

REYNOLDS, SMITH AND HILLS
ARCHITECTS · ENGINEERS · PLANNERS
INCORPORATED

October 15, 1984

Mr. Edward J. Svec, Engineer
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

SUBJECT: Construction Permit Application
AC16-090996
Maxwell House Division of General Foods Corp.
RSH AEP NO. 83177 000

Dear Mr. Svec:

Per your discussions with Mr. James Hellier of Maxwell House Division of General Foods Corporation, on October 10, 1984, the amended calculations for the subject permit application are attached.

Please call me if you have any questions concerning these calculations.

Very truly yours,

George L. Whitmer,
Solid Waste Resource Manager
Environmental Engineering Division

GLW:adh

Enclosure

cc: James Hellier

ATTACHMENT 3 - AMMENDED
CALCULATIONS FOR COFFEE PROCESSING
APPLICATION PAGE 4 OF 12

SOURCE No. 1 DUST COLLECTOR BAG HOUSE

EMISSION RATE

REF. ESE BAG HOUSE TEST DATED 4-17-81 (ATTACH. # 9)

GRAINS PER SCFD = ~~0.00687~~ 0.007 (AVERAGE 3 TEST RUNS)

DSCFM - 1970 - (SEE ATTACHMENT 4)

RATE : LBS/HR = $1970 \times ~~0.00687~~\ 0.007 \times 60 \times \frac{1}{7000} = ~~0.116~~\ 0.118$ lbs/HR.

: TONS/YR = 8400 HRS X 0.116 lbs/HR =

$\frac{~~974.4~~}{991}$ LBS $\times \frac{1}{2000} = \frac{~~0.487~~}{0.50}$

SOURCE No. 2 AIRVEYOR BAG HOUSE

EMISSION RATE

REF. BAG HOUSE TEST. 4-17-81 (ATTACH # 9)

GRAINS PER SCFD = $0.005 + 0.0006 + 0.0006/3 = ~~0.000567~~\ 0.0006$

DSCFM = 1025 (ATTACHMENT # 4)

RATE : LBS/HR = $1025 \times 0.000567 \times 60 \times \frac{1}{7000} = ~~0.00498~~\ 0.005$

TONS/YR = ~~0.00498~~ 0.005 lbs/HR. X 8400 HR./YR. = 42 #/yr

$\times \frac{1}{2000}$ = 0.0209 TONS/YR.

SOURCE No. 3 CENTRIFUGAL WASHER VENT

EMISSION RATE

AIR & WATER VAPOR FROM CENTRIFUGAL WASHER

NO TEST DATA AVAILABLE. ASSUME 0.01 lbs./HR. PARTICULATES.

TONS PER YEAR = $8400 \times 0.01 \times \frac{1}{2000} = \underline{0.042}$

CHECKING AGAINST R.A.C.T.

DSCFM = 2078 (ATTACHMENT #4)

2078×0.03 gr/SCFM $\times 60 \times \frac{1}{7000} = 0.534$ lbs/HR

SOURCE No. 4 BEAN DRYER

EMISSION RATE

BASED ON MAXWELL HOUSE DIVISION ENGINEERING ESTIMATE. PARTICULATE LOADING TO THE CYCLONE IS 15 LBS/HR. WE ESTIMATE THAT THE CYCLONE WILL REMOVE A MINIMUM OF 70% OF THE POTENTIAL EMISSIONS.

EMISSION: = 4.5 lbs/HR

: = $4.5 \times 8400 \times \frac{1}{2000}$ = 18.90 TONS/YR

GRAINS PER DSCFM = $\frac{4.5 \text{ lbs.} \times 7000}{24404 \times 60}$ = 0.022 gr.

SOURCE No. 5 BUNKER CYCLONES

EMISSION RATE

REF. ESE CYCLONE TEST DATA. DATED 4-17-81

GRAINS PER SCFD = 0.0588 + 0.0594 + 0.0609/3 = 0.06 ~~0.0597~~

REF. ATTACHMENT 4, FLOW = 319 DSCFM

RATE: lbs./HR. = 319 DSCFM × 60 × 0.0597 × $\frac{1}{7000}$ = 0.1632

: TONS/YR. = 8400 HRS. × 0.1632 lbs/HR. × $\frac{1}{2000}$ = 0.6854 TONS/YR.

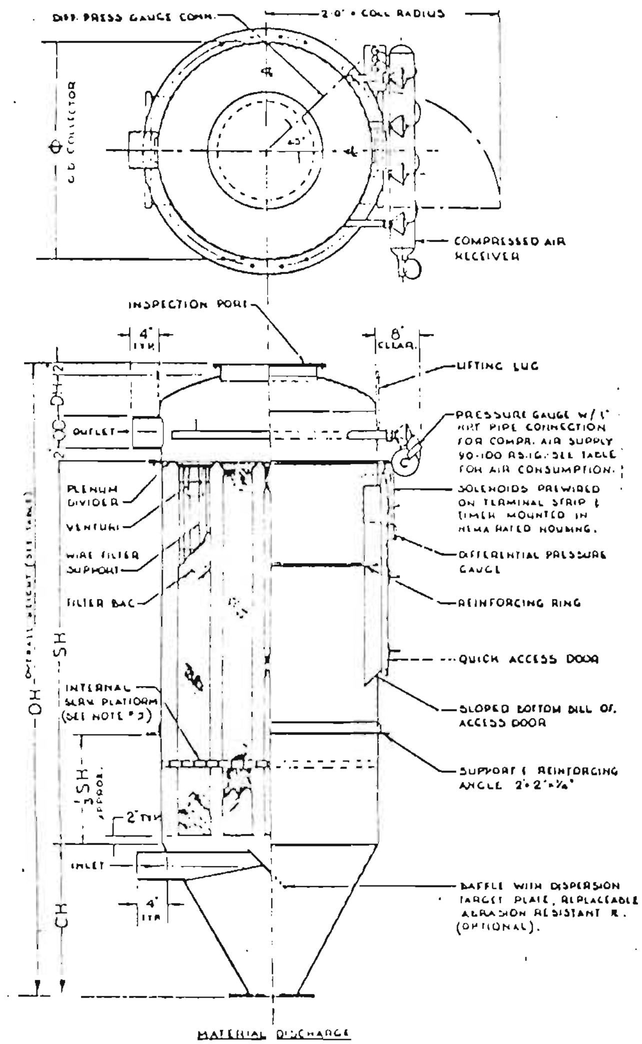
SOURCE No. 6 BEAN PROCESSOR VENT

REF. ATTACHMENT "C" TO DER COMMENT No. 5

V.O.C. EMISSION, @ 120° F. = 6.2×10^{-5} lbs. V.O.C./ lbs GREEN (TABLE 3)

V.O.C. @ 15000 lbs./HR. GREEN = $15000 \times 6.2 \times 10^{-5}$ = 0.93 lbs/HR.

TONS V.O.C./YR. = $0.93 \times 8400 \times \frac{1}{2000}$ = 3.906 TONS/YR.



CLOTH
AIR RATIO
2:16

MODEL →	FR 4-5	4-7.5	FR 7-5	7-7.5	7-10	FR 9-5	9-7.5	9-10	FR 12-5	12-7.5	12-10	FR 16-7.5	16-10	FR 18-7.5	18-10	FR [illegible]	[illegible]
FILTER AREA (SQ FT)	20	30	35	52.5	70	45	67.5	90	60	90	120	120	150	135	180	187.5	250
NUMBER of BAGS	4	4	7	7	7	9	9	9	12	12	12	16	16	18	18	25	25
BAG LENGTH (in.)	45	68	45	68	90	45	68	90	45	68	90	68	90	68	90	68	90
Φ (OUTSIDE DIA. in.)	18	18	24	24	24	30	30	30	30	30	30	36	36	42	42	48	48
OH (OVERALL HEIGHT) & O.D. OUTLET (TABLE DIM.)	5-4¼	7-3	5-10	7-9	9-1	6-1	8-3	10-1	6-4	8-3	10-1	8-5	10-7	9-2	11-0	9-8	[illegible]
SH (SHELL HEIGHT in)	47	70	47	70	92	47	70	92	47	70	92	70	92	70	92	70	92
CH (CONE HEIGHT in)	8¼	8¼	13¼	13¼	13¼	19¼	19¼	19¼	19¼	19¼	19¼	24¼	24¼	29¼	29¼	34¼	34¼
DH (DISHED HD HT in)	4	4	5	5	5	5	5	5	5	5	5	6	6	6	6	7	7
VOLUMETRIC DISPLACEMENT INCL. CLEAN AIR CHAMB. (ft³)	8.8	12.2	16.5	22.5	28.4	26.6	33.5	45	26.6	33.5	45	53	66.5	68	86	94.5	124
COMPR AIR REQMT (SCFM)	3.0	3.2	3.4	3.6	3.8	4.2	4.6	4.8	5.5	5.7	6.0	6.5	6.5	6.7	7.0	8.5	[illegible]
NO of SOLENOID VALVES	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	7	7
PRESS RATING (in. Hg)	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
RISING (CAN) VELOCITY FT/MIN @ 3/1 RATIO	83	129	78	111	157	62	93	139	93	159	105	124	166	93	127	104	138
NET WT. LBS. APPROX.	520	570	570	610	650	695	761	820	850	935	1040	1020	1145	1210	1250	1385	1540

MODEL →	FR 32-7.5	32-10	FR 42-7.5	42-10	FR 49-7.5	49-10	FR 56-7.5	56-10	FR 64-7.5	64-10	FR 82-7.5	82-10	FR 90-7.5	90-10	FR [illegible]	[illegible]
FILTER AREA (SQ FT)	240	320	315	420	367.5	450	420	560	480	640	615	820	675	900	795	1060
NUMBER of BAGS	32	32	42	42	49	49	56	56	64	64	82	82	90	90	106	106
BAG LENGTH (IN)	68	90	68	90	68	90	68	90	68	90	68	90	68	90	68	90
Φ (OUTSIDE DIA. IN)	54	54	60	60	66	66	72	72	78	78	84	84	90	90	96	96
OH (OVERALL HEIGHT) & O.D. OUTLET (TABLE DIM.)	10-9½	12-7¼	11-4	13-3	11-11	13-9	12-6	14-4	13-2	15-0	13-8	15-6	14-6	16-4	15-1	[illegible]
S.H. (SHELL HEIGHT in)	70	92	70	92	70	92	70	92	70	92	70	92	70	92	70	92
C.H. (CONE HEIGHT in)	39¼	39¼	45	45	50¼	50¼	55¼	55¼	60¼	60¼	65¼	65¼	72¼	72¼	76¼	76¼
D.H. (DISHED HD. HT. in)	8	8	9	9	10	10	10	10	11	11	12	12	13	13	14	14
VOLUMETRIC DISPLACEMENT INCL. CLEAN AIR CHAMBER (ft³)	141	172	174	212	217	260	261	313	306	358	365	435	427	506	492	582
COMPR AIR REQMT. (SCFM)	9.5	10.2	11.4	11.6	11.8	11.9	10.6	10.8	11.0	11.3	12.3	12.6	13.0	13.6	14.2	15.0
NO of SOLENOID VALVES	7	7	9	9	9	9	8	8	8	8	10	10	10	10	12	12
PRESS. RATING (in. Hg)	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
RISING (CAN) VELOCITY FT/MIN @ 3/1 RATIO	110	146	115	153	106	141	106	157	100	132	114	152	105	142	115	150
NET WT. LBS. APPROX.	1687	1805	1995	2190	2345	2625	2705	2960	3025	3437	4505	5075	5125	5640	5720	6214

NOTES:

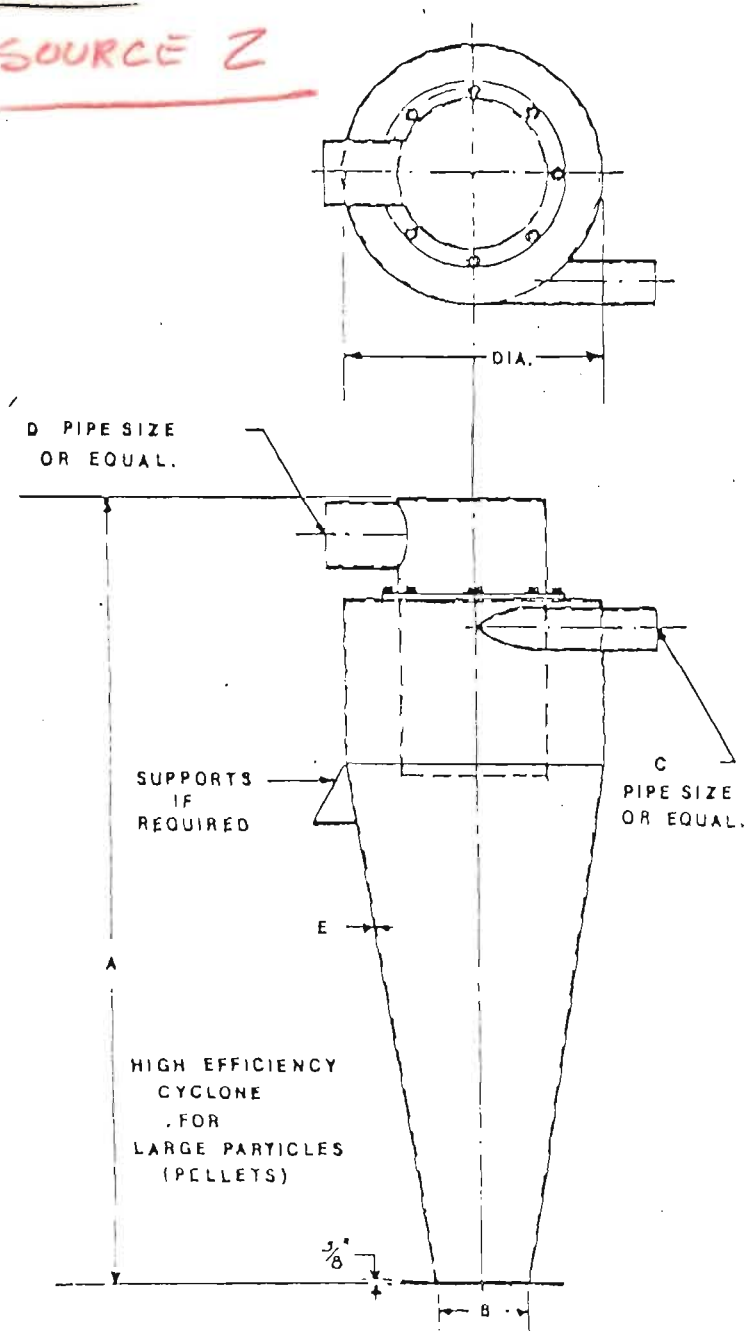
1. INLET SIZE SHALL BE BASED ON RECOMMENDED 4,000-5,000 FT/MIN. VELOCITY.
2. OUTLET SIZE SHALL BE BASED ON RECOMMENDED 3,000-4,000 FT/MIN. VELOCITY.
3. CLEAN AIR PLENUM HEIGHT IS DETERMINED BY OUTLET O.D. (MINIMUM HEIGHT 10")
4. CONE HEIGHT DIMENSIONS ARE BASED ON AN 8" I.D. MATERIAL DISCHARGE FLANGE (OTHER SIZES ARE AVAILABLE).
5. COLLECTOR MODELS OVER 5'-0" DIA. SHALL HAVE INTERNAL SERVICE PLATFORM
6. COMPRESSED AIR CONSUMPTION ASSUMES PROPER SIZING OF DUST COLLECTOR.
7. UNITS OVER 8'-0" DIA. ARE AVAILABLE
8. CAN BE BE FURNISHED TO WITHSTAND 17" OF HG NEG PRESSURE SO THE FILTER-COLLECTOR MAY BE THE PRIMARY COLLECTOR IN A NEGATIVE PRESSURE AIR CONVEYING SYSTEM.

HARDY SYSTEMS CORPORATION
CHICAGO, ILLINOIS

GENERAL DATA
FILTER RECEIVER — SERIES "FR"

SCALE	DATE
NONE	4-1-81
DRAWN BY	DRAWING NO.
N.B.	B-269
APPROVED BY	
E.B.	

SOURCE 2



DIA	CFM	DIMENSIONS (In Inches)				
		A	B	C	D	E Gauge
10	120	32	4	1 - 2½	2 - 3	10
12	170	41	6	2 - 3	2 - 3½	10
14	240	44	6	2 - 3½	3 - 4	10
16	310	50	8	3 - 4	4 - 5	10
18	380	54	8	3 - 4	4 - 5	10
20	480	63	8	3½ - 5	4 - 6	10
22	580	71	10	4 - 5	6	10
26	800	83	12	6 - 7	8	10
30	1070	95	12	6 - 8	10	10
32	1250	101	12	8	10	10
38	1720	121	14	8 - 9	12	10
40	1900	128	14	10	12	10
44	2300	140	16	10 - 12	14	10

PRELIMINARY!
DO NOT USE THIS PRINT FOR FABRICATION

MATERIALS OF CONSTRUCTION
- MILD STEEL
- STAINLESS STEEL
- ALUMINUM

ACCESSORIES AND ALTERNATES
- FLANGED INLET AND OUTLET
- SCREENED OUTLET
- SUPPORTS
- ACCESS OPENINGS
- VIEW PORTS
- LEVEL INDICATORS
- SPECIAL PAINT

HARDY SYSTEMS CORPORATION

CHICAGO, ILLINOIS

TYPICAL CYCLONE RECEIVER

				SCALE	DATE
				NONE	4-16-82
				DRAWN BY	DRAWING NO.
				JS	A-168
				APPROVED BY	

Name	Representing	Phone No.
Lloyd N. Stebbins	RS+H	904-739-2000
Jim Hellier	Maxwell House	904-358-3251
Bob Cerosky	General Foods - MaxHouse	914-335-6688
Peter Cunningham	HBG&S for MaxHse	904/222-7500
Nancy Wright	DER - Attorney	904/488-9730
Edward J. Svec	DER - BAQM	(904) 488-1344
Bill Thomas	" "	"

REYNOLDS, SMITH AND HILLS

ARCHITECTS · ENGINEERS · PLANNERS

INCORPORATED

September 21, 1984

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

SUBJECT: Construction Permit Application AC 16-090996
Maxwell House Div. of General Foods Corp.
RSH A.E.P. Number 83177-000

Dear Mr. Fancy:

As requested in your letter of September 6, 1984, the items missing from the subject permit are enclosed. The permit should now be complete. Please note that your letter referenced an earlier permit which was subsequently withdrawn. The enclosed comments refer to the permit that was submitted on September 4, 1984. This has resulted in some of the attachment numbers being different from those referenced in your letter. Where this has occurred, we have cross-referenced the old and new attachment numbers for clarification.

Please call me if you have any questions regarding the enclosed information or the original permit submittal.

Very truly yours,

Lloyd H. Stebbins, P.E., Head
Chemical and Process Department
Environmental Engineering Division

/jl

Enclosure

cc: Jerry Woosley, Bio-Environmental Services
Doug Dutton, Northeast District, DER
James R. Hellier, Maxwell House
Peter Cunningham, Esq.

E R R A T U M

ATTACHMENT 2B

D. Control Devices

Source 3 - Carter Day Vent: Efficiency should read N/A instead of 85.6%.

Source 6 - Condensor Vent: Efficiency should read 85.6% instead of N/A.

DER COMMENT

No. 1

Letter of Authorization, as required in Section I. A., is attached.

GENERAL FOODS MANUFACTURING CORPORATION / *250 North Street, White Plains, N.Y. 10625*

August 31, 1984

State of Florida
Department of Environmental Regulations
2600 Blair Stone Road
Tallahassee, Florida 32301

Attention: Mr. Steven Smallwood
Chief, Air Pollution Control

Gentlemen:

This is to advise your office that Robert T. Marek, Plant Manager, Maxwell House Division, Jacksonville, Florida is designated to sign as authorized representataive for air permit applications and reports for the Jacksonville General Foods Manufacturing Corporation facility.

Very truly yours,

H. A. Golle
Chairman

HAG:jg/23

DER COMMENT

NO. 2

Attachment 4 (Emission Stack Geometry and Flow Characteristics) has been revised to include the water vapor content and velocity, as required in Section III. H. and is attached.

ATTACHMENT 4

H. Emission Stack Geometry and Flow Characteristics:

SOURCE	STACK HEIGHT (FT)	STACK DIAMETER	FLOW (ACFM)	FLOW (DSCFM)	EXIT TEMP. (°F)	WATER VAPOR CONTENT (%)	VELOCITY (FPS)
1	80	12"	2,000	1,970	80	1.2	42.4
2	100.5	9"	1,040	1,025	80	1.0	39.2
3	82	12"	2,500	2,078	180	39.4	53.1
4	76	1.0'X14'	30,000	24,404	130	8.7	3.3
5	100.75	13.75"	337	319	100	1.4	5.4
6	100	6"	40	32	200	60.0	3.4

DER COMMENT

NO. 3

The flow rates given in Attachment 4 (referenced as Attachment 3, your letter) for sources 1 and 5 are individual flow rates.

Source No. 1: Flow rate = 1970 DSCFM.

Source No. 1 is an individual vacuum collection system that draws from two (2) surge bins.

Source No. 5: Flow rate = 319 DSCFM.

Source No. 5 is an individual source as it discharges to one (1) cyclone at a time.

DER COMMENT

NO. 4

Stack diameter for Source No. 4 given in Attachment 4 (referenced as Attachment 3, in your letter) is 1.0' x 14.0'. Please refer to Drawing No. 6555-5302-2, Heat Recovery Unit Reservoir Detail which is included with the other drawings under DER Comment No. 6.

DER COMMENT

NO. 5

Documentation for all emission factors used in the calculations in Attachment 3 (referenced as Attachment 2, your letter) are attached as follows:

Source	BASIS FOR EMISSIONS ESTIMATE
1	ESE Report (1)
2	ESE Report (1)
3	Best Engineering Estimate
4	70% Removal Estimate (2)
5	ESE Report (1)
6	Estimate from Pilot Plant Testing at Maxwell House Research at Hoboken, NJ (3)

(1) Attachment A: Sources 1, 2, 5

(2) Attachment B: Source 4 (We are using 70% because we feel that this is more realistic for a cyclone)

(3) Attachment C: Source 6

A REPORT ON
PARTICULATE EMISSIONS TESTS

MAXWELL HOUSE COFFEE DIVISION
GENERAL FOODS CORPORATION

Jacksonville, Florida

Prepared by:

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.
Gainesville, Florida

ESE No. 80-107-100

April 1981

ATTACHMENT A
SOURCES 1, 2, 5

Table 1. Emission Inventory: Maxwell House Coffee, Jacksonville, Florida (Continued, Page 2 of 2)

Flow Diagram Location	Source	Stack Dimension (ft)	Flow Rate (SCFMD)	Stack Temp. (°F)	Moisture (%)	Emission Rate (lb/hr)	No. Units
	Regular Coffee Roasting Process, Permit No. AO 16 2408 (Continued)						
X	Cold Chaff Thermalo Cyclone	1.17 ID	850	75.8	1.7	0.154	1
XI	Thermalo Cooling Car Cyclone	2.0 ID	5,334	84.7	1.3	0.270	2
XII	Thermalo Stoner Cyclone	2.0 ID	5,780	80.1	1.3	0.190	2
XIII	Thermalo Regular Coffee Scale Cyclone	1.67 ID	1,000*	86.9	2.6	0.090	1
XIV	Regular Coffee Scale and Airveyor Cyclone	1.67 ID	1,000*	57.5	1.8	0.097	15
	Green Bean Bulk Handling Process, Permit No. AO 16 2407 (Figure 3)						
I	Fuller Baghouse (4th level)	1.0x1.0	3,674	80.6	1.0	0.017	1
II	Fuller Baghouse (roof)	0.63 ID	964	200.1	1.2	0.057	3
III	Gooseneck Bunker Vent	0.50 ID	319	65.6	1.4	0.164	18
	Soluble Spray Dryer No. 2, Permit No. AO 16 2366 (Figure 4)						
I	Spray Dryer No. 2	3.50 ID	21,652	259.7	8.4	1.931	1
	Soluble Spray Dryer No. 1, Permit No. AO 16 2445 (Figure 5)						
I	Spray Dryer No. 1	3.50 ID	25,574	241.3	8.4	1.357	1
	Agglomerating Process, Permit No. AO 16 2404 (Figure 6)						
I	Spray Dryer	3.33 ID	20,633	217.8	9.3	0.893	1

Source: Environmental Science and Engineering, Inc., 1980.

* Due to poor sampling locations, measured flow rates are considered to be in error. Design flow rates furnished by Maxwell House have been substituted based on transport velocity and duct areas.

† Emission parameters are the same as soluble coffee roasting thermalo roaster afterburner.

SOURCE 1

Table 24

PLANT NAME - MAXWELL HOUSE COFFEE LOCATION -

STACK ID - NEGECOFFEE FUELER BAGHSE SAMPLING TRAIN - PARTICULATES

- E N G L I S H UNITS -

		RUN 001	RUN 002	RUN 003	AVG
DATE		2/26/80	2/26/80	2/26/80	
STARTING TIME		1308	1438	1600	
ENDING TIME		1408	1538	1704	
MINUTES		60.	60.	60.	
NUMBER OF POINTS		12.	12.	12.	
PB	(IN HG)	30.40	30.40	30.40	
PS	(IN HG)	30.40	30.40	30.40	
CP		0.840	0.840	0.840	
METER BOX NO.		3	3	3	
Y-FACTOR		1.0000	1.0000	1.0000	
AS	(SF)	0.31	0.31	0.31	
AS'	(SF)	0.31	0.31	0.31	
DN	(IN)	0.1860	0.1860	0.1860	
AN	(SF)	0.000189	0.000189	0.000189	
TM	(DEG R)	513.6	512.3	512.0	
TS	(DEG R)	652.5	680.0	647.9	660.14
VM	(ACF)	33.943	33.377	33.802	
VMSTD	(SCFD)	35.072	35.166	35.099	
CONDENSATE	(ML)	9.1	9.3	9.2	
% H2O SPECIFIED		0.00	0.00	0.00	
CALC % H2O		1.19	1.24	1.21	1.21
% H2O @ SATURATION		65.98	100.00	59.80	75.26
% CO2		0.0	0.0	0.0	0.00
% O2		21.0	21.0	21.0	21.00
% CO		0.0	0.0	0.0	0.00
MWD	(LB/LB-MOLE)	28.84	28.84	28.84	28.84
MWW	(LB/LB-MOLE)	28.71	28.71	28.71	28.71
DELTA H AVG	(IN H2O)	1.042	1.080	1.072	
SQRT DELTA P AVG	(IN H2O)	1.034	1.055	1.035	
VS	(F/S)	64.17	66.90	64.03	65.04
QS'	(ACFM)	1182.	1232.	1170.	1197.
QS''	(ACFMD)	1168.	1217.	1161.	1182.
QS	(SCFMD)	964.	964.	965.	964.
QS SPEC.	(SCFMD)	964.	964.	965.	
% ISO		100.39	98.98	99.99	99.79
TOTAL FILTER CATCH	(MG)	14.30	8.90	12.20	
TOTAL WASH CATCH	(MG)	3.51	4.95	3.61	
TOTAL CATCH	(MG)	17.81	13.85	15.81	
CONCENTRATION	(GR/ACF)	0.0003	0.0047	0.0056	0.0055
CONCENTRATION	(GR/SCFD)	0.0077	0.0061	0.0068	0.01
EMISSION RATE	(LB/HR)	0.06	0.05	0.06	0.0568

Table 1. Emission Inventory: Maxwell House Coffee, Jacksonville, Florida (Continued, Page 2 of 2)

Flow Diagram Location	Source	Stack Dimension (ft)	Flow Rate (SCFMD)	Stack Temp. (°F)	Moisture (%)	Emission Rate (lb/hr)	No. Units
	Regular Coffee Roasting Process, Permit No. AO 16 2408 (Continued)						
X	Cold Chaff Thermalo Cyclone	1.17 ID	850	75.8	1.7	0.154	1
XI	Thermalo Cooling Car Cyclone	2.0 ID	5,334	84.7	1.3	0.270	2
XII	Thermalo Stoner Cyclone	2.0 ID	5,780	80.1	1.3	0.190	2
XIII	Thermalo Regular Coffee Scale Cyclone	1.67 ID	1,000*	86.9	2.6	0.090	1
XIV	Regular Coffee Scale and Airveyor Cyclone	1.67 ID	1,000*	57.5	1.8	0.097	15
	Green Bean Bulk Handling Process, Permit No. AO 16 2407 (Figure 3)						
I	Fuller Baghouse (4th level)	1.0x1.0	3,674	80.6	1.0	0.017	1
II	Fuller Baghouse (roof)	0.63 ID	964	200.1	1.2	0.057	3
III	Gooseneck Bunker Vent	0.50 ID	319	65.6	1.4	0.164	18
	Soluble Spray Dryer No. 2, Permit No. AO 16 2366 (Figure 4)						
I	Spray Dryer No. 2	3.50 ID	21,652	259.7	8.4	1.931	1
	Soluble Spray Dryer No. 1, Permit No. AO 16 2445 (Figure 5)						
I	Spray Dryer No. 1	3.50 ID	25,574	241.3	8.4	1.357	1
	Agglomerating Process, Permit No. AO 16 2404 (Figure 6)						
I	Spray Dryer	3.33 ID	20,633	217.8	9.3	0.893	1

Source: Environmental Science and Engineering, Inc., 1980.

* Due to poor sampling locations, measured flow rates are considered to be in error. Design flow rates furnished by Maxwell House have been substituted based on transport velocity and duct areas.

† Emission parameters are the same as soluble coffee roasting thermalo roaster afterburner.

SOURCE 2

Table 23

PLANT NAME - MAXWELL HOUSE COFFEE LOCATION -

STACK ID - FULLER BAGHSE 4TH LEVEL SAMPLING TRAIN - PARTICULATES

- E N G L I S H UNITS -

		RUN 001	RUN 002	RUN 003	AVG
DATE		2/28/80	2/28/80	2/28/80	
STARTING TIME		1450	1606	1720	
ENDING TIME		1547	1704	1817	
MINUTES		55.	55.	55.	
NUMBER OF POINTS		11.	11.	11.	
Pb	(IN HG)	30.35	30.35	30.35	
PS	(IN HG)	30.35	30.35	30.35	
CP		0.840	0.840	0.840	
METER BOX NO.		3	3	3	
Y-FACTOR		1.0000	1.0000	1.0000	
AS	(SF)	1.00	1.00	1.00	
AS'	(SF)	1.00	1.00	1.00	
DN	(IN)	0.1860	0.1860	0.1860	
AN	(SF)	0.000189	0.000189	0.000189	
TM	(DEG R)	537.1	535.8	535.5	
TS	(DEG R)	540.0	540.0	541.8	540.61
VM	(ACF)	37.463	37.025	35.995	
VMSTD	(SCFD)	37.619	37.266	36.259	
CONDENSATE	(ML)	7.3	8.9	8.1	
% H2O SPECIFIED		0.00	0.00	0.00	
CALC % H2O		0.91	1.12	1.05	1.03
% H2O @ SATURATION		3.40	3.40	3.61	3.47
% CO2		0.0	0.0	0.0	0.00
% O2		21.0	21.0	21.0	21.00
% CO		0.0	0.0	0.0	0.00
Mwd	(LB/LB-MOLE)	28.84	28.84	28.84	28.84
Mww	(LB/LB-MOLE)	28.74	28.72	28.73	28.73
DELTA H AVG	(IN H2O)	1.400	1.391	1.447	
SQRT DELTA P AVG	(IN H2O)	1.095	1.090	1.117	
VS	(F/S)	61.85	61.58	63.25	62.23
QS'	(ACFM)	3711.	3695.	3795.	3734.
QS''	(ACFMD)	3677.	3654.	3755.	3695.
QS	(SCFMD)	3660.	3637.	3725.	3674.
QS SPEC.	(SCFMD)	3660.	3637.	3725.	
% ISO		99.05	98.76	93.81	97.20
TOTAL FILTER CATCH	(MG)	0.60	0.70	0.50	
TOTAL WASH CATCH	(MG)	0.51	0.71	0.85	
TOTAL CATCH	(MG)	1.11	1.41	1.35	
CONCENTRATION	(GR/ACF)	0.0004	0.0006	0.0006	0.0005
CONCENTRATION	(GR/SCFD)	0.0005	0.0006	0.0006	0.00
EMISSION RATE	(LB/HR)	0.01	0.02	0.02	0.0169

Table 1. Emission Inventory: Maxwell House Coffee, Jacksonville, Florida (Continued, Page 2 of 2)

Flow Diagram Location	Source	Stack Dimension (ft)	Flow Rate (SCFMD)	Stack Temp. (°F)	Moisture (%)	Emission Rate (lb/hr)	No. Units
	Regular Coffee Roasting Process, Permit No. AO 16 2408 (Continued)						
X	Cold Chaff Thermalo Cyclone	1.17 ID	850	75.8	1.7	0.154	1
XI	Thermalo Cooling Car Cyclone	2.0 ID	5,334	84.7	1.3	0.270	2
XII	Thermalo Stoner Cyclone	2.0 ID	5,780	80.1	1.3	0.190	2
XIII	Thermalo Regular Coffee Scale Cyclone	1.67 ID	1,000*	86.9	2.6	0.090	1
XIV	Regular Coffee Scale and Airveyor Cyclone	1.67 ID	1,000*	57.5	1.8	0.097	15
	Green Bean Bulk Handling Process, Permit No. AO 16 2407 (Figure 3)						
I	Fuller Baghouse (4th level)	1.0x1.0	3,674	80.6	1.0	0.017	1
II	Fuller Baghouse (roof)	0.63 ID	964	200.1	1.2	0.057	3
III	Gooseneck Bunker Vent†	0.50 ID	319	65.6	1.4	0.164	18
	Soluble Spray Dryer No. 2, Permit No. AO 16 2366 (Figure 4)						
I	Spray Dryer No. 2	3.50 ID	21,652	259.7	8.4	1.931	1
	Soluble Spray Dryer No. 1, Permit No. AO 16 2445 (Figure 5)						
I	Spray Dryer No. 1	3.50 ID	25,574	241.3	8.4	1.357	1
	Agglomerating Process, Permit No. AO 16 2404 (Figure 6)						
I	Spray Dryer	3.33 ID	20,633	217.8	9.3	0.893	1

Source: Environmental Science and Engineering, Inc., 1980.

* Due to poor sampling locations, measured flow rates are considered to be in error. Design flow rates furnished by Maxwell House have been substituted based on transport velocity and duct areas.

† Emission parameters are the same as soluble coffee roasting thermalo roaster afterburner.

SOURCE 5

Table 25

PLANT NAME - MAXWELL HOUSE LOCATION -

STACK ID - BUNKER GOOSENECK C-2 SAMPLING TRAIN - PARTICULATES

- E N G L I S H UNITS -

		RUN 001	RUN 002	RUN 003	AVG
DATE		2/28/80	2/28/80	2/28/80	
STARTING TIME		1025	1142	1255	
ENDING TIME		1125	1242	1355	
MINUTES		60.	60.	60.	
NUMBER OF POINTS		12.	12.	12.	
PB	(IN HG)	30.50	30.50	30.40	
PS	(IN HG)	30.50	30.50	30.40	
CP		0.840	0.840	0.840	
METER BOX NO.		3	3	3	
Y-FACTOR		1.0000	1.0000	1.0000	
AS	(SF)	0.20	0.20	0.20	
AS'	(SF)	0.20	0.20	0.20	
DN	(IN)	0.2550	0.2550	0.2550	
AN	(SF)	0.000355	0.000355	0.000355	
TM	(DEG R)	546.9	556.8	560.5	
TS	(DEG R)	524.2	526.4	526.3	525.64
VM	(ACF)	33.574	36.015	34.982	
VMSTD	(SCFD)	33.230	35.033	33.683	
CONDENSATE	(ML)	10.0	11.6	9.2	
% H2O SPECIFIED		0.00	0.00	0.00	
CALC % H2O		1.41	1.55	1.28	1.41
% H2O @ SATURATION		1.98	2.14	2.14	2.09
% CO2		0.0	0.0	0.0	0.00
% O2		21.0	21.0	21.0	21.00
% CO		0.0	0.0	0.0	0.00
MWD	(LB/LB-MOLE)	28.84	28.84	28.84	28.84
MWW	(LB/LB-MOLE)	28.69	28.67	28.70	28.69
DELTA H AVG	(IN H2O)	0.959	1.087	1.000	
SQRT DELTA P AVG	(IN H2O)	0.468	0.497	0.480	
VS	(F/S)	26.01	27.71	26.75	26.82
QS'	(ACFM)	306.	320.	315.	315.
QS''	(ACFMD)	302.	321.	311.	311.
QS	(SCFMD)	311.	329.	318.	319.
QS SPEC.	(SCFMD)	311.	329.	318.	
% ISO		98.50	98.02	97.70	98.07
TOTAL FILTER CATCH	(MG)	96.50	110.90	107.10	
TOTAL WASH CATCH	(MG)	30.45	24.25	26.11	
TOTAL CATCH	(MG)	126.95	135.15	133.21	
CONCENTRATION	(GR/ACF)	0.0598	0.0600	0.0615	0.0604
CONCENTRATION	(GR/SCFD)	0.0588	0.0594	0.0609	0.00
EMISSION RATE	(LB/HR)	0.16	0.17	0.17	0.1638

DUCON ENVIRONMENTAL TECHNOLOGY

A DIVISION OF THE DUCON COMPANY INCORPORATED

August 8, 1984

Maxwell House Division
General Foods Corporation
P.O. Box 2010
Jacksonville, Florida 32203

Attention: Mr. Jim Hellier

Reference: Ducon Contract C84-0297

Dear Sir:

We wish to confirm the efficiency prediction of the Size 890 VM 810 Duclone given to Miss Dianne Sarlo previously.

Based upon the distribution of the material, as shown on the included curve, we expect an efficiency of 99.8 percent recovery.

We trust this information is useful to you. If you have need of further assistance please contact us.

Very truly yours,

THE DUCON COMPANY, INC.

Frank Teevan

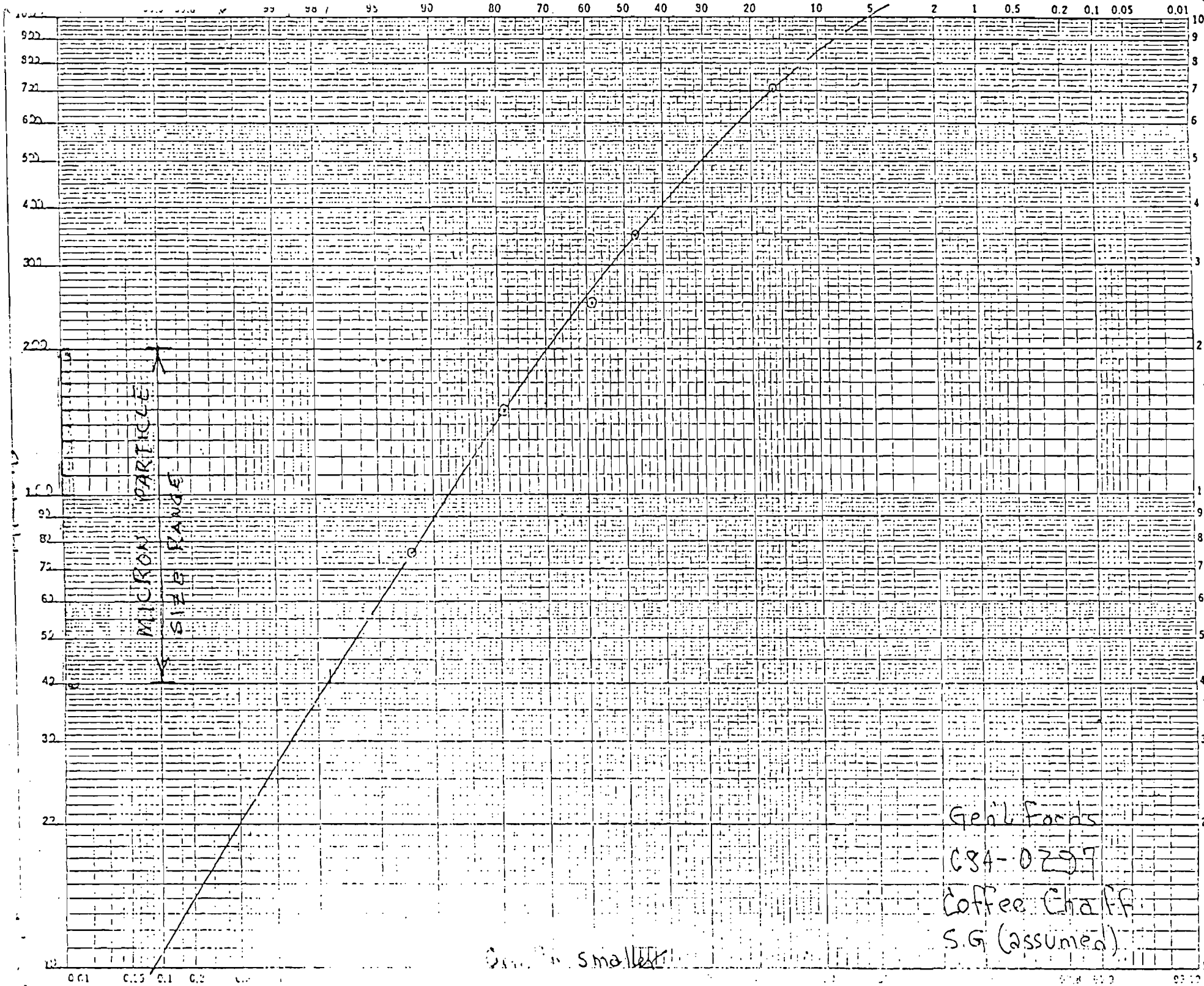
FT:cg
Encl.
cc: Mr. Phil Dohl
Proctor & Schwartz
251 Gibraltar Road
Horsham, PA 19044

cc: Air Engineering Systems
Chadds Ford, PA

ATTACHMENT B

147 EAST SECOND STREET MINEOLA, NEW YORK 11501 TEL: 516 741-6100 TWX 510 222-9861

SOURCE 4


MICRON PARTICLE SIZE RANGE
Smaller
Gehl Foods
C84-0207
Coffee Chaff
S.G (assumed)

DOCUMENTATION FOR V.O.C. EMISSION FACTOR

Summary of Report on Tests Run by Maxwell House Division Research on 7/19/84 to Determine Rate of V.O.C. Emission from Proposed Green Bean Treating Process

J. R. Hellier
M. H. Div., G.F.C.
Jacksonville, FL
September 12, 1984

ATTACHMENT C
SOURCE 6

Technical Section

The mini-percs in Tarrytown were used to column steam Ivory Coast M's green beans. Loads of 10 Kilos (22 lbs.) of green beans were charged to the column along with 7 Kilos (15.4 lbs.) of water. The column was then sealed and high pressure steam was injected into the bottom of the column until the pressure in the column reached between 90 and 100 psig (about 9 minutes and about 6 lbs. of steam). The top of the column was then vented and the vapor along with entrained liquid, (the water originally charged with the beans, and steam that condensed while pressure was building) was directed into the bottom of an adjacent column. The liquid remained in this column (which was preheated to prevent the condensing of vapors in the column) while the vapor was vented out of the top into the condenser. After five minutes the steam was turned off while the column continued to be vented until the pressure approached atmospheric.

The temperature of the condensate was controlled by varying the temperature and flow rate of the cooling water. The condensate was directed into a vacuum flask which functioned as a vapor-liquid separator. The vapor coming off the flask was passed through a rotameter and discharged into an ice bath or bubbled through water to absorb the remaining volatiles.

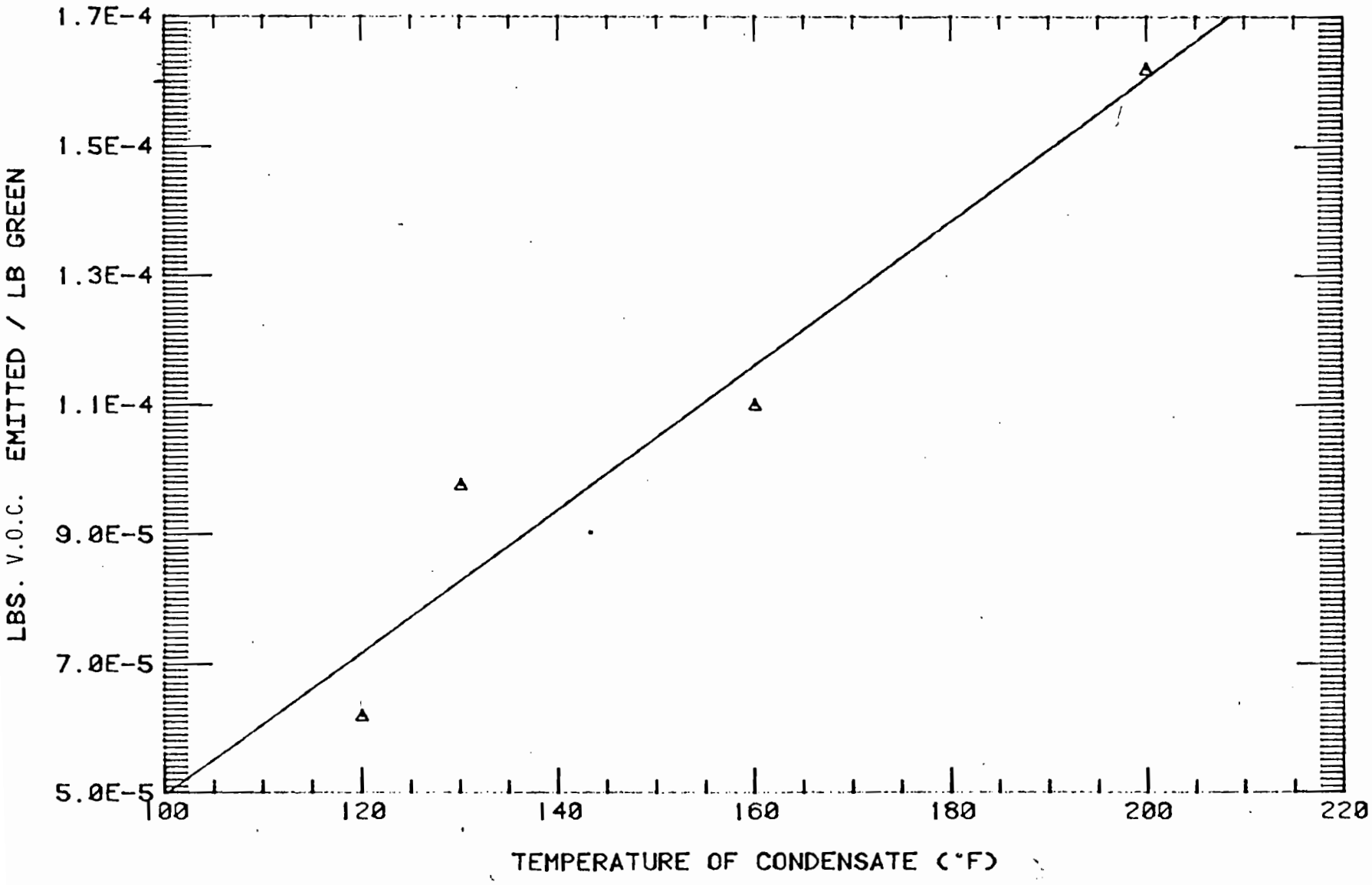
Samples of condensate, the vapor coming off the condenser during steaming and during venting, were collected for evaluation. Data for four runs of interest are presented in Table 3. Other runs were performed with modified conditions to characterize the flow rates and components present. Specifically, several runs were performed with Colombian beans for mass-spec analysis. One run was performed on an autoclave in Cranbury to obtain a complete characterization of the V.O.C. emitted as well as to compare the components found in Central beans with the other types.

Table 3

Green Bean Steaming Data
Ivory Coast M's

Run #	15	16	18	6
lbs. Beans	22	22	22	22
Lbs. Water	15.4	15.4	15.4	15.4
lbs. Liquid	7.7	7.9	8.4	-
pH Liquid	6.4	6.2	6.7	-
TA Liquid	.17	.21	.09	-
lbs. Condensate	5.5	5.7	6.6	4.4
Temp.Condensate (^{o}F)	120	130	200	160
ug/cc Condensate	1350	-	-	1910
pH Condensate	5.5	5.2	5.7	-
TA Condensate	.48	.41	.53	-
During Steaming:				
Vapor Rate	.16 CFM	.15 CFM	.17	-
Time	5 Min.	5 Min.	5 Min.	-
Cu. Ft.	.8	.75	.85	-
ug/cc Vapor	20.2	36.9	33.5	
During Venting:				
Vapor Rate	.2	.07	.22	-
Time	10 Min.	10 Min.	13 Min.	-
Cu. Ft.	2.0	.7	2.86	5.5 grams
ug/cc Vapor	2.8	1.45	11.8	4330
lbs. V.O.C. in Condensate	7.43×10^{-3}	6.64×10^{-3}	5.23×10^{-3}	6.3×10^{-3}
lbs. V.O.C. in Steaming	1.01×10^{-3}	1.73×10^{-3}	1.78×10^{-3}	
lbs. V.O.C. in Venting	$.349\times10^{-3}$	$.42\times10^{-3}$	1.78×10^{-3}	2.56×10^{-3}
% Recovery	84.5	77.6	59.5	69
ug/cc emitted	8	11.5	18.7	
# V.O.C. /# green	6.2×10^{-5}	9.77×10^{-5}	16.2×10^{-5}	

FIGURE 4: TOTAL LBS. V.O.C. EMITTED / LB GREEN VS. CONDENSATE TEMPERATURE



DER COMMENT

NO. 6

Information required in Section V, Items 2, 4 and 5 is attached as follows:

Item 2

a. Basis of emission estimate: Refer to attachments under DER Comment No. 5 and calculations in Attachment 3 of the permit application.

b. Proposed test methods: Refer to Attachment 10 of the permit application.

Item 4 - Design details for all air pollution control systems are attached as follows:

Source	Description
1	Drawing No. 6555-5403-2 and description listed on Purchase Order No. 6555-36.
2	Description listed on Purchase Order No. 6555-21, Page 2 of 5, and Drawing Nos. A-168 & B-269.
3	Drawing No. 6555-5404-2.
4	Drawing No. 6555-5305-2
5	Description listed on Purchase Order No. 6555-21, Page 1 of 5 and Drawing No. B-305.

Item 5 - Derivation of control device efficiency:

Source	Description
1	Vendor guarantee dated 8/24/84 (Flex-Kleen).
2	Vendor performance specifications, Purchase Order No. 6555-21, Page 4 of 5.
3	N/A. Water vapor only - no control device.
4	Vendor guarantee dated 8/8/84 (Ducon).
5	Vendor performance specifications, Purchase Order No. 6555-21, Page 3 of 5.
6	Based on tests run by Maxwell House Division Research on 7/19/84 (attached under DER Comment No. 5).

CENTRAL ENGINEERING 250 NORTH ST., WHITE PLAINS, N.Y. 10625

SOURCE (1) **BEST AVAILABLE COPY**

PURCHASE OR

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO. 6555-36
5/10/84		Motor Freight	N-30	8/1/84	ORDER NUMBER MUST BE ON PACKAGES, AND ALL CORRES

SELLER: THE TENNANT COMPANY
17 Briar Lane, Suite 304
Houston, TX 77207
Att: Mr. Frank Cmajdaka
713-627-8330

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 East Bay Street
Jacksonville, FL 32203
Att: Mr. Michael Rotell 904-358-3251

DATE RECEIVED 8/30, 19 84
VIA PRO # 6555-36
WEIGHT CHARGES PPD
COLL.
ITEMS RECEIVED ARE MARKED ✓ OR AS NOTED, INSPECTED & FOUND AS SPECIFIED IN PURCHASE ORDER, EXCEPT AS NOTED.
RECEIVED BY
ACCEPTED IN GOOD CONDITION BY
CONTRACTOR SIGNATURE
COMMENTS: M Rotell 9/5/84

Item No. Description and Price

Confirming verbal order of 5/10/84 to F. Cmajdaka by L. Hansen/R. Pawlak.

Furnish and deliver One Dust Collector in accordance with, but not limited to, the specifications, terms and conditions set forth herein.

✓ 1 - Model PVTL-16 Flex-Kleen Complete Dust Collector, 720 square feet of filter cloth area, providing an air-to-cloth ratio of 2.77/1 at 2000 ACFM.

The unit to include the following:

- 12 GA. welded steel housing capable of operating pressure of 17" W.G. positive or negative.
- Stub pipe gas outlet.
- Compressed air header assembly, complete with aluminum diaphram.
- Valves and solenoid pilot valves, all prepiped and prewired into a NEMA 4 box on the header.
- Astro-Flex electronic sequential timer shipped separately for field installation in the box on the header and for easy wiring of the solenoids.
- Internal air piping, die-cast aluminum venturi nozzles, 1/8" minimum section.
- Stainless steel bag clamps.
- Air pressure gauge. Pressure differential gauges.
- Quick access man door.
- Pyramid hopper, with 60 Deg. sloping sides, including stub piping inlet, corner saddle supports and flanged dust outlet.

05459

Richard Pawlak, Buyer
(914) 335-6040

PURCHASE ORD

DATE		NO. 6555-38
5/10/84		ORDER NUMBER MUST BE ON I PACKAGES, AND ALL CORRESPO

Item No. Description and Price

- Inlet baffle.
- Support legs 2' clearance below hopper outlet flange.
- Side bag removal in lieu of top bag removal.
- Fire protection water spray nozzles to be located inside of collector. Nozzle will be prepiped to a single connection with controls and valves by Owner.
- 8" Meyer rotary air lock.

TAG NO.: 6101 - Bag House
6102 - Airlock

ACCOUNT NO.: 37.10

Price ---------- $ 7,835.00

Total Price This Order (excluding taxes and freight) ---------- $7,835.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

WARRANTY

Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hamann/R. Pawlak c/o mailing address.

05460

RECEIVING

JUN 29 1984

PURCHASE ORD

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO. 6555-21
6/21/84	Glenview, IL	Dedicated Truck	See Below	9/3/84	ORDER NUMBER MUST BE ON I PACKAGES, AND ALL CORRESPO

SELLER: HARDY SYSTEMS CORPORATION
c/o Coastal Kinetics Co.
5610 Green Springs
Houston, TX 77066
Att: Mr. William Perkola 713-893-6836

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32202
Att: Mr. Michael Rotell 904-360-3251

INVOICE TO:

GENERAL FOODS CORPORATION
Central Engineering
P.O. Box 7679
Lafayette, IN 47903
Att: R.D. Long

Item No.	Description and Price

Confirming verbal order of 6/5/84 to W. Perkola by M. Rotell/R. Pawlak.

Furnish and deliver One Lot of Pneumatic Conveying Systems in accordance with, but not limited to; the specifications, terms and conditions set forth herein.

1. PRESSURE SYSTEM - As per Seller's #88-67, attached by reference only. SOURCE 5

1 - Hardy Systems Corporation positive pressure pump package complete with a 412 RCS-J Roots Blower, 60 HP, TEFC-XT Reliance motor with a 1.15 service factor, common base, v-belt drive, enclosed guard, pressure relief valve, pressure switch, inlet filter-silencer, discharge silencer, check valve, pressure gage, and all necessary fittings and labor to complete the package.

TAG NO.: 318

1 - Meyer 12 x 12 heavy duty Rota-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 service factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO. 320

1 - Pick-up manifold to fit under the 12 x 12 feeder specified above with 4-½" O.D. plain tube ends.

180' - 4-½" O.D. by 11 gauge mild steel tubing.

Richard Pawlak, Senior Buyer
FIELD ENGINEERING 335-0640

06195

PURCHASE ORDER

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVOICE, PACKAGES, AND ALL CORRESPONDENCE

Item No. | Description and Price

5 - 4-½" O.D. by 11 gauge 90° bends on a 48" centerline radius.

2 - 4-½" O.D. by 11 gauge 90° bends on a 24" centerline radius (air handling only).

80 - 4-3C Norris couplings with white gaskets.

3 - Hardy Systems Corporation 4-½" line diverters, cast iron construction, complete with air operated cylinder, four way solenoid valve, and position limit switches.

TAG NOS.: 401, 402, 403

Price ---------- $ 25,611.00

2. VACUUM SYSTEM - as per Seller's Proposal #84-67, attached by reference only SOURCE 2

1. Stoddared Model F64-5 inlet air filter to be mounted on intake conveying tubing.

TAG NO.: 105

1 - Moyer 12 x 12 heavy duty, Roto-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO.: 104

1 - Pickup manifold to fit under the 12 x 12 feeder specified above with 6" O.D. plain tube ends.

180' - 5" O.D. by 11 gauge mild steel tubing.

3 - 5" O.D. by 11 gauge 90° bends on a 60" centerline radius.

5 - 5" O.D. by 11 gauge 90° bends on a 36" centerline radius (air handling only).

32 - 5-3C Norris couplings with white gaskets.

1 - Hardy Systems Corporation cyclone receiver constructed of 12 gauge carbon steel.

TAG NO.: 111

PURCHASE ORDE

DATE 6/21/84

NO. 6553-21

ORDER NUMBER MUST BE ON INVO PACKAGES, AND ALL CORRESPONDE

Item No. Description and Price

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package to fit on the cyclone receiver and complete with a Reliance 1½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, end shear baffle.

TAG NO.: 109

1 - Hardy Systems Corporation filter-receiver, model FR7-10, complete with 70 square feet of cloth area, automatic reverse jet cleaning and 60° sloped hopper.

TAG NO.: 113

1 - Meyer 6 x 6 HD Roto-Flo Feeder package to fit on the filter receiver specified above. The feeder package will be complete with a bevelled edged rotor, chain drive, enclosed metal guard, and Reliance ½ HP, TEFC-SXT motor-reducer with 1.0 Service Factor.

TAG NO.: 119

1 - Hardy Systems Corporation vacuum pump package complete with a 418 RCS-J Roots blower, 40 HP, TEFC-XT Reliance motor, with 1.15 Service Factor, common base, v-belt drive, enclosed guard, vacuum relief valve, vacuum switch, discharge silencer, vacuum gage, and all necessary fittings and labor to complete the package.

TAG NO.: 121

Price ---------- $ 30,050.00

Total ---------- $ 55,661.00

PERFORMANCE SPECIFICATIONS sources

The Pressure System is designed to handle 25,000#/hour of green coffee beans with a bulk density of 40#/cubic foot. The material will be transported through 180 feet of 4-i" O.D. by 11 gage conveying tube with 5 90° bends. The material will be dropped into the conveying line through a rotary airlock feeder and discharged into one of three receiving cyclones mounted on storage bins. The conveying air will be discharged through filter boxes mounted on the receiver tops. The cyclone receivers shall be constructed of 12 gage carbon steel and built to Seller's standard design.

PURCHASE ORDE

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INV PACKAGES, AND ALL CORRESPOND

Item No. Description and Price

Source 2

The Vacuum System will transport 20,000#/hour of coffee beans through 180 feet of 5" O.D. by 11 gage conveying tubing with 3 90° bends. The material will be deposited in a cyclone receiver and gravity discharged through a rotary airlock feeder. The dust laden air will be filtered in a cloth tube filter.

NOTES:

1. Price(s) do not include freight charges, mechanical or electrical installation, controls, motor starters, startup service, supervision or sales taxes (where applicable).

2. Seller to consolidate all equipment at Seller's Glenview plant for one shipment to the jobsite. Dedicated truck to deliver equipment to jobsite would cost approximately $1,700.00 net.

3. Drawings for approval to be delivered 2-3 weeks after receipt of purchase order.

DRAWINGS

MAIL: GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32203

(1) Sepia of System drawings, for Approval.

TO: Mr. Michael Retell at above mailing address.

ACCOUNT NOS.: 32.10 - $25,611.00
30.10 - $30,050.00

Total Price This Order ---------- $ 55,661.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

PURCHASE ORD

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON I PACKAGES, AND ALL CORRESPO

Item No. Description and Price

TERMS OF PAYMENT

10% Prepayment payable 15 days after receipt of Drawings Approval, and sign acceptance copy of this order;
80% Payable 15 days after receipt of equipment at Owner's jobsite;
10% Payable 30 days after installation and complete acceptance by Owner's Representative but no later than 45 days after delivery.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

NOTIFICATION OF SHIPMENT

On date of shipment notify Buyer: R. Pawlak (914) 335-0640 with necessary shipping information.

WARRANTY

Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hamann/R. Pawlak c/o mailing address.

06199

FIELD ENGINEERING

JUN 29 1984

PURCHASE ORD

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO. 6555-21
6/21/84	Glenview, IL	Dedicated Truck	See Below	9/3/84	ORDER NUMBER MUST BE ON IN PACKAGES, AND ALL CORRESPON

SELLER: HARDY SYSTEMS CORPORATION
c/o Coastal Kinetics Co.
5610 Green Springs
Houston, TX 77066
Att: Mr. William Perkola 713-893-6836

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32202
Att: Mr. Michael Rotell 904-360-3251

INVOICE TO:

GENERAL FOODS CORPORATION
Central Engineering
P.O. Box 7078
Lafayette, IN 47903
Att: R.D. Long

Item No. Description and Price

Confirming verbal order of 6/5/84 to M. Perkola by M. Rotell/R. Pawlak.

Furnish and deliver One Lot of Pneumatic Conveying Systems in accordance with, but not limited to; the specifications, terms and conditions set forth herein.

1. PRESSURE SYSTEM - As per Seller's #98-67, attached by reference only. SOURCE S

1 - Hardy Systems Corporation positive pressure pump package complete with a (412) RCS-J Roots Blower, 60 HP, TEFC-XT Reliance motor with a 1.15 service factor, common base, v-belt drive, enclosed guard, pressure relief valve, pressure switch, inlet filter-silencer, discharge silencer, check valve, pressure gage, and all necessary fittings and labor to complete the package.

TAG NO.: 318

1 - Meyer 12 x 12 heavy duty Roto-Flo feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 service factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO. 320

1 - Pick-up manifold to fit under the 12 x 12 feeder specified above with 4-½" O.D. plain tube ends.

180' - 4-½" O.D. by 11 gauge mild steel tubing.

Richard Pawlak, Senior Buyer
FIELD ENGINEERING 312/335-6640

06195

PURCHASE ORDER

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVOICES, PACKAGES, AND ALL CORRESPONDENCE

Item No. Description and Price

5 - 4-½" O.D. by 11 gauge 90° bends on a 48" centerline radius.

2 - 4-½" O.D. by 11 gauge 90° bends on a 24" centerline radius (air handling only).

80 - 4-3C Norris couplings with white gaskets.

3 - Hardy Systems Corporation 4-½" line diverters, cast iron construction, complete with air operated cylinder, four way solenoid valve, and position limit switches.

TAG NOS.: 401, 402, 403

Price ---------- $ 25,611.00

2. VACUUM SYSTEM - as per Seller's Proposal #84-67, attached by reference only Source 2

1. Stoddered Model F64-5 inlet air filter to be mounted on intake conveying tubing.

TAG NO.: 105

1 - Meyer 12 x 12 heavy duty, Rota-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO.: 104

1 - Pickup manifold to fit under the 12 x 12 feeder specified above with 6" O.D. plain tube ends.

180' - 5" O.D. by 11 gauge mild steel tubing.

3 - 5" O.D. by 11 gauge 90° bends on a 60" centerline radius.

5 - 5" O.D. by 11 gauge 90° bends on a 36" centerline radius (air handling only).

32 - 5-3C Norris couplings with white gaskets.

1 - Hardy Systems Corporation cyclone receiver constructed of 12 gauge carbon steel.

TAG NO.: 111

PURCHASE ORDE

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVO PACKAGES, AND ALL CORRESPONDE

Item No. | Description and Price

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package to fit on the cyclone receiver and complete with a Reliance 1½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, end shear baffle.

TAG NO.: 109

1 - Hardy Systems Corporation filter-receiver, model FR7-10, complete with 70 square feet of cloth area, automatic reverse jet cleaning and 60° sloped hopper.

TAG NO.: 113

1 - Meyer 6 x 6 HD Roto-Flo Feeder package to fit on the filter receiver specified above. The feeder package will be complete with a bevelled edged rotor, chain drive, enclosed metal guard, and Reliance ½ HP, TEFC-SXT motor-reducer with 1.0 Service Factor.

TAG NO.: 119

1 - Hardy Systems Corporation vacuum pump package complete with a 418 RCS-J Roots blower, 40 HP, TEFC-XT Reliance motor, with 1.15 Service Factor, common base, v-belt drive, enclosed guard, vacuum relief valve, vacuum switch, discharge silencer, vacuum gage, and all necessary fittings and labor to complete the package.

TAG NO.: 121

Price ---------- $ 30,050.00

Total ---------- $ 55,661.00

PERFORMANCE SPECIFICATIONS sources

The Pressure System is designed to handle 25,000#/hour of green coffee beans with a bulk density of 40#/cubic foot. The material will be transported through 180 feet of 4-i" O.D. by 11 gage conveying tube with 5 90° bends. The material will be dropped into the conveying line through a rotary airlock feeder and discharged into one of three receiving cyclones mounted on storage bins. The conveying air will be discharged through filter boxes mounted on the receiver tops. The cyclone receivers shall be constructed of 12 gage carbon steel and built to Seller's standard design.

CENTRAL ENGINEERING 250 NORTH ST., WHITE PLAINS, N.Y. 10625

PURCHASE ORDE

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INV PACKAGES, AND ALL CORRESPOND

Item No. Description and Price

Source 2

The Vacuum System will transport 20,000#/hour of coffee beans through 180 feet of 5" O.D. by 11 gage conveying tubing with 3 90° bends. The material will be deposited in a cyclone receiver and gravity discharged through a rotary airlock feeder. The dust laden air will be filtered in a cloth tube filter.

NOTES:

1. Price(s) do not include freight charges, mechanical or electrical installation, controls, motor starters, startup service, supervision or sales taxes (where applicable).

2. Seller to consolidate all equipment at Seller's Glenview plant for one shipment to the jobsite. Dedicated truck to deliver equipment to jobsite would cost approximately $1,700.00 net.

3. Drawings for approval to be delivered 2-3 weeks after receipt of purchase order.

DRAWINGS

MAIL: GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32203

(1) Sepia of System drawings, for approval.

TO: Mr. Michael Retell at above mailing address.

ACCOUNT NOS.: 32.10 - $25,611.00
30.10 - $30,050.00

Total Price This Order ---------- $ 55,661.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

06198

FIELD ENGINEERING

PURCHASE ORD

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON I PACKAGES, AND ALL CORRESPO

Item No. | Description and Price

TERMS OF PAYMENT

10% Prepayment payable 15 days after receipt of Drawings Approval, and sign acceptance copy of this order;
80% Payable 15 days after receipt of equipment at Owner's jobsite;
10% Payable 30 days after installation and complete acceptance by Owner's Representative but no later than 45 days after delivery.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

NOTIFICATION OF SHIPMENT

On date of shipment notify Buyer: R. Pawlak (914) 335-0640 with necessary shipping information.

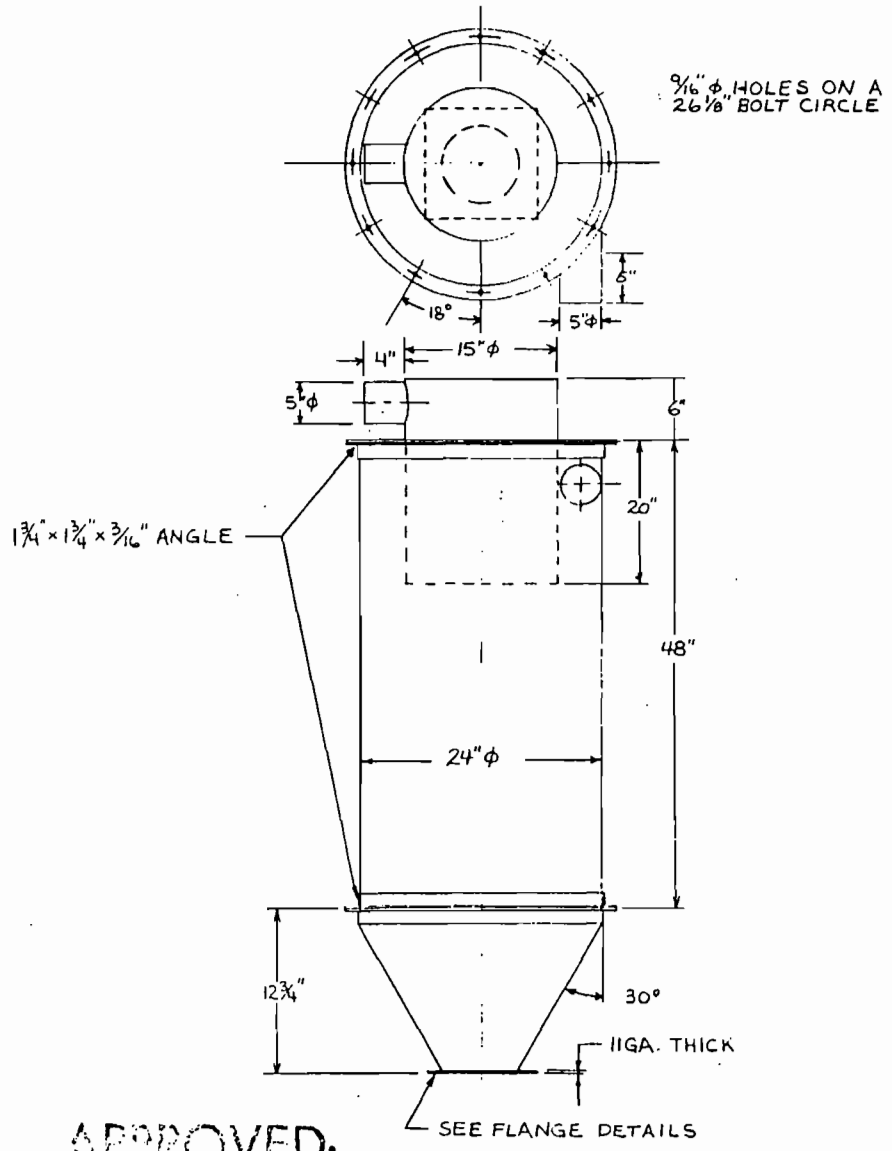
WARRANTY

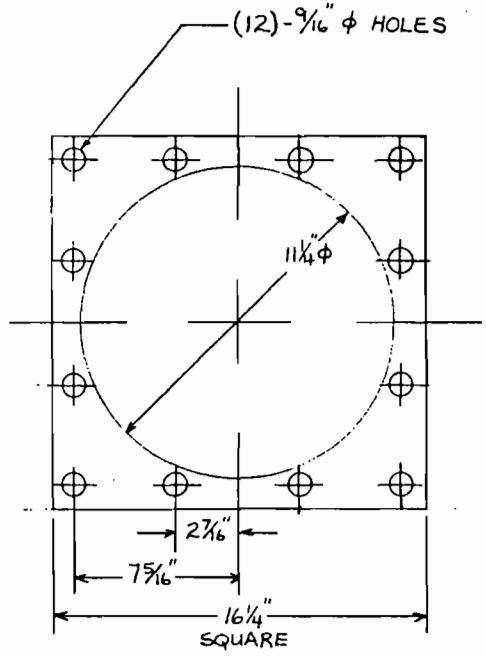
Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hansmann/R. Pawlak c/o mailing address.

06199

FIELD ENGINEERING





APPROVED:

By: [signature]

Date: 6-18-84

HARDY SYSTEMS CORPORATION
CHICAGO, ILLINOIS

24" ϕ CYCLONE RECEIVER
GENERAL FOODS CORPORATION

SCALE	DATE
NONE	6-8-84
DRAWN BY: JS	DRAWING NO. B-305
APPROVED BY	

SOURCE 5

One MonarchWestern Center
165 North Canal Street, Chicago, Illinois [illegible]
312 [illegible]-8300 Telex 254254

SOURCE 1

Flex-Kleen
Research-Cottrell

The Tennant Company
17 Briar Hollow Lane, Suite 304
Houston, Texas 77027
(713) 627-8330

August 24, 1984

General Foods, Inc.
Maxwell House Plant
735 East Bay Street
Jacksonville, FL 32203

Attention: Mr. Mike Rotell

Reference: Dust Collector
PO #6555-36

Gentlemen:

Per your request the guaranteed efficiency of this collector will be 99.9% removal of particles in excess of 2 microns.

If you have any further questions, please let us know.

Very truly yours,

FLEX-KLEEN CORPORATION

A. Frank Cmajdalka
Houston Office

AFC/clb

cc: F/K

JUN 29 1984

PURCHASE ORD

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO. 6555-21
6/21/84	Glenview, IL	Dedicated Truck	See Below	9/3/84	ORDER NUMBER MUST BE ON IN PACKAGES, AND ALL CORRESPON

SELLER: HARDY SYSTEMS CORPORATION
c/o Coastal Kinetics Co.
5610 Green Springs
Houston, TX 77066
Att: Mr. William Perkola 713-893-6836

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32202
Att: Mr. Michael Rotell 904-360-3251

INVOICE TO:

GENERAL FOODS CORPORATION
Central Engineering
P.O. Box 7679
Lafayette, IN 47903
Att: R.D. Long

Item No. Description and Price

Confirming verbal order of 6/5/84 to W. Perkola by M. Rotell/R. Pawlak.

Furnish and deliver One Lot of Pneumatic Conveying Systems in accordance with, but not limited to; the specifications, terms and conditions set forth herein.

1. PRESSURE SYSTEM - As per Seller's #09-67, attached by reference only. SOURCE S

1 - Hardy Systems Corporation positive pressure pump package complete with a 412 RCS-J Roots Blower, 60 HP, TEFC-XT Reliance motor with a 1.15 service factor, common base, v-belt drive, enclosed guard, pressure relief valve, pressure switch, inlet filter-silencer, discharge silencer, check valve, pressure gage, and all necessary fittings and labor to complete the package.

TAG NO.: 318

1 - Meyer 12 x 12 heavy duty Roto-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 service factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO. 320

1 - Pick-up manifold to fit under the 12 x 12 feeder specified above with 4-½" O.D. plain tube ends.

180' - 4-½" O.D. by 11 gauge mild steel tubing.

Richard Pawlak, Senior Buyer
FIELD ENGINEERING (914) 335-6640

06195

PURCHASE ORDER

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVOICES, PACKAGES, AND ALL CORRESPONDENCE

Item No. Description and Price

5 - 4-½" O.D. by 11 gauge 90° bends on a 48" centerline radius.

2 - 4-½" O.D. by 11 gauge 90° bends on a 24" centerline radius (air handling only).

30 - 4-3C Morris couplings with white gaskets.

3 - Hardy Systems Corporation 4-½" line diverters, cast iron construction, complete with air operated cylinder, four way solenoid valve, and position limit switches.

TAG NOS.: 401, 402, 403

Price ---------- $ 25,611.00

2. VACUUM SYSTEM - as per Seller's Proposal #84-67, attached by reference only Source 2

1. Stoddered Model F64-5 inlet air filter to be mounted on intake conveying tubing.

TAG NO.: 105

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO.: 104

1 - Pickup manifold to fit under the 12 x 12 feeder specified above with 6" O.D. plain tube ends.

100' - 5" O.D. by 11 gauge mild steel tubing.

3 - 5" O.D. by 11 gauge 90° bends on a 60" centerline radius.

5 - 5" O.D. by 11 gauge 90° bends on a 36" centerline radius (air handling only).

32 - 5-3C Morris couplings with white gaskets.

1 - Hardy Systems Corporation cyclone receiver constructed of 12 gauge carbon steel.

TAG NO.: 111

06196

FIELD ENGINEERING

PURCHASE ORDE

DATE		NO. 0555-21
6/21/84		ORDER NUMBER MUST BE ON INVO PACKAGES, AND ALL CORRESPONDE

Item No.	Description and Price

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package to fit on the cyclone receiver and complete with a Reliance 1½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, end shear baffle.

TAG NO.: 109

1 - Hardy Systems Corporation filter-receiver, model FR7-10, complete with 70 square feet of cloth area, automatic reverse jet cleaning and 60° sloped hopper.

TAG NO.: 113

1 - Meyer 6 x 6 HD Roto-Flo Feeder package to fit on the filter receiver specified above. The feeder package will be complete with a bevelled edged rotor, chain drive, enclosed metal guard, and Reliance ½ HP, TEFC-SXT motor-reducer with 1.0 Service Factor.

TAG NO.: 119

1 - Hardy Systems Corporation vacuum pump package complete with a 418 RCS-J Roots blower, 40 HP, TEFC-XT Reliance motor, with 1.15 Service Factor, common base, v-belt drive, enclosed guard, vacuum relief valve, vacuum switch, discharge silencer, vacuum gage, and all necessary fittings and labor to complete the package.

TAG NO.: 121

Price ---------- $ 30,050.00

Total ---------- $ 55,661.00

PERFORMANCE SPECIFICATIONS SOURCES

The Pressure System is designed to handle 25,000#/hour of green coffee beans with a bulk density of 40#/cubic foot. The material will be transported through 180 feet of 4-½" O.D. by 11 gage conveying tube with 5 90° bends. The material will be dropped into the conveying line through a rotary airlock feeder and discharged into one of three receiving cyclones mounted on storage bins. The conveying air will be discharged through filter boxes mounted on the receiver tops. The cyclone receivers shall be constructed of 12 gage carbon steel and built to Seller's standard design.

06197

FIELD ENGINEERING

PURCHASE ORDI

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INV PACKAGES, AND ALL CORRESPONC

Item No. Description and Price

Source 2

The Vacuum System will transport 20,000#/hour of coffee beans through 180 feet of 5" O.D. by 11 gage conveying tubing with 3 90° bends. The material will be deposited in a cyclone receiver and gravity discharged through a rotary airlock feeder. The dust laden air will be filtered in a cloth tube filter.

NOTES:

1. Price(s) do not include freight charges, mechanical or electrical installation, controls, motor starters, startup service, supervision or sales taxes (where applicable).

2. Seller to consolidate all equipment at Seller's Glenview plant for one shipment to the jobsite. Dedicated truck to deliver equipment to jobsite would cost approximately $1,700.00 net.

3. Drawings for approval to be delivered 2-3 weeks after receipt of purchase order.

DRAWINGS

MAIL: GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32203

(1) Sepia of System drawings, for approval.

TO: Mr. Michael Rotell at above mailing address.

ACCOUNT NOS.: 32.10 - $25,611.00
30.10 - $30,050.00

Total Price This Order ---------- $ 55,661.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

06198

FIELD ENGINEERING

PURCHASE ORD

DATE 5/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON IN PACKAGES, AND ALL CORRESPON

Item No. | Description and Price

TERMS OF PAYMENT

10% Prepayment payable 15 days after receipt of Drawings Approval, and sign acceptance copy of this order;
80% Payable 15 days after receipt of equipment at Owner's jobsite;
10% Payable 30 days after installation and complete acceptance by Owner's Representative but no later than 45 days after delivery.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

NOTIFICATION OF SHIPMENT

On date of shipment notify Buyer: R. Pawlak (914) 335-6640 with necessary shipping information.

WARRANTY

Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hamann/R. Pawlak c/o mailing address.

06199

FIELD ENGINEERING

DUCON ENVIRONMENTAL
A DIVISION OF THE DUCON COMPANY INCORPORATED

August 8, 1984

Maxwell House Division
General Foods Corporation
P.O. Box 2010
Jacksonville, Florida 32203

Attention: Mr. Jim Hellier

Reference: Ducon Contract C84-0297

Dear Sir:

We wish to confirm the efficiency prediction of the Size 890 VM 810 Duclone given to Miss Dianne Sarlo previously.

Based upon the distribution of the material, as shown on the included curve, we expect an efficiency of 99.8 percent recovery.

We trust this information is useful to you. If you have need of further assistance please contact us.

Very truly yours,

THE DUCON COMPANY, INC.

Frank Teevan

FT:cg
Encl.
cc: Mr. Phil Dohl
Proctor & Schwartz
251 Gibraltar Road
Horsham, PA 19044

cc: Air Engineering Systems
Chadds Ford, PA

147 EAST SECOND STREET MINEOLA, NEW YORK 11501 TEL: 516 741-6100 TWX 510 222-9861

SOURCE 4

JUN 29 1984

PURCHASE ORDER

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO. 6555-21
6/21/84	Glenview, IL	Dedicated Truck	See Below	9/3/84	ORDER NUMBER MUST BE ON IN PACKAGES, AND ALL CORRESPON

SELLER: HARDY SYSTEMS CORPORATION
c/o Coastal Kinetics Co.
5610 Green Springs
Houston, TX 77066
Att: Mr. William Perkola 713-893-6836

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32202
Att: Mr. Michael Rotell 904-360-3251

INVOICE TO:

GENERAL FOODS CORPORATION
Central Engineering
P.O. Box 7673
Lafayette, IN 47903
Att: R.D. Long

Item No. Description and Price

Confirming verbal order of 6/5/84 to M. Perkola by M. Rotell/R. Pawlak.

Furnish and deliver One Lot of Pneumatic Conveying Systems in accordance with, but not limited to; the specifications, terms and conditions set forth herein.

1. PRESSURE SYSTEM - As per Seller's #98-67, attached by reference only. SOURCE S

1 - Hardy Systems Corporation positive pressure pump package complete with a 412 RCS-J Roots Blower, 60 HP, TEFC-XT Reliance motor with a 1.15 service factor, common base, v-belt drive, enclosed guard, pressure relief valve, pressure switch, inlet filter-silencer, discharge silencer, check valve, pressure gage, and all necessary fittings and labor to complete the package.

TAG NO.: 318

1 - Meyer 12 x 12 heavy duty Roto-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 service factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO. 320

1 - Pick-up manifold to fit under the 12 x 12 feeder specified above with 4-½" O.D. plain tube ends.

180' - 4-½" O.D. by 11 gauge mild steel tubing.

06195

Richard Pawlak, Senior Buyer
FIELD ENGINEERING 335-6640

PURCHASE ORDER

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVOICES, PACKAGES, AND ALL CORRESPONDENCE

Item No. Description and Price

5 - 4-½" O.D. by 11 gauge 90° bends on a 48" centerline radius.

2 - 4-½" O.D. by 11 gauge 90° bends on a 24" centerline radius (air handling only).

80 - 4-3C Morris couplings with white gaskets.

3 - Hardy Systems Corporation 4-½" line diverters, cast iron construction, complete with air operated cylinder, four way solenoid valve, and position limit switches.

TAG NOS.: 401, 402, 403

Price ---------- $ 25,611.00

2. VACUUM SYSTEM - as per Seller's Proposal #84-67, attached by reference only SOURCE 2

1. Stoddered Model F64-5 inlet air filter to be mounted on intake conveying tubing.

TAG NO.: 105

1 - Meyer 12 x 12 heavy duty, Rota-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO.: 104

1 - Pickup manifold to fit under the 12 x 12 feeder specified above with 6" O.D. plain tube ends.

100' - 5" O.D. by 11 gauge mild steel tubing.

3 - 5" O.D. by 11 gauge 90° bends on a 60" centerline radius.

5 - 5" O.D. by 11 gauge 90° bends on a 36" centerline radius (air handling only).

32 - 5-3C Morris couplings with white gaskets.

1 - Hardy Systems Corporation cyclone receiver constructed of 12 gauge carbon steel.

TAG NO.: 111

PURCHASE ORDER

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVOICE, PACKAGES, AND ALL CORRESPONDENCE

Item No.	Description and Price

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package to fit on the cyclone receiver and complete with a Reliance 1½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, end shear baffle.

TAG NO.: 109

1 - Hardy Systems Corporation filter-receiver, model FR7-10, complete with 70 square feet of cloth area, automatic reverse jet cleaning and 60° sloped hopper.

TAG NO.: 113

1 - Meyer 6 x 6 HD Roto-Flo Feeder package to fit on the filter receiver specified above. The feeder package will be complete with a bevelled edged rotor, chain drive, enclosed metal guard, and Reliance ½ HP, TEFC-SXT motor-reducer with 1.0 Service Factor.

TAG NO.: 119

1 - Hardy Systems Corporation vacuum pump package complete with a 418 RCS-J Roots blower, 40 HP, TEFC-XT Reliance motor, with 1.15 Service Factor, common base, v-belt drive, enclosed guard, vacuum relief valve, vacuum switch, discharge silencer, vacuum gage, and all necessary fittings and labor to complete the package.

TAG NO.: 121

Price ---------- $ 30,050.00

Total ---------- $ 55,661.00

PERFORMANCE SPECIFICATIONS SOURCES

The Pressure System is designed to handle 25,000#/hour of green coffee beans with a bulk density of 40#/cubic foot. The material will be transported through 180 feet of 4-i" O.D. by 11 gage conveying tube with 5 90° bends. The material will be dropped into the conveying line through a rotary airlock feeder and discharged into one of three receiving cyclones mounted on storage bins. The conveying air will be discharged through filter boxes mounted on the receiver tops. The cyclone receivers shall be constructed of 12 gage carbon steel and built to Seller's standard design.

06197

FIELD ENGINEERING

CENTRAL ENGINEERING 250 NORTH ST., WHITE PLAINS, N.Y. 10625

PURCHASE ORDE

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INV PACKAGES, AND ALL CORRESPONDE

Item No. Description and Price

Source 2

The Vacuum System will transport 20,000#/hour of coffee beans through 180 feet of 5" O.D. by 11 gage conveying tubing with 3 90° bends. The material will be deposited in a cyclone receiver and gravity discharged through a rotary airlock feeder. The dust laden air will be filtered in a cloth tube filter.

NOTES:

1. Price(s) do not include freight charges, mechanical or electrical installation, controls, motor starters, startup service, supervision or sales taxes (where applicable).

2. Seller to consolidate all equipment at Seller's Glenview plant for one shipment to the jobsite. Dedicated truck to deliver equipment to jobsite would cost approximately $1,700.00 net.

3. Drawings for approval to be delivered 2-3 weeks after receipt of purchase order.

DRAWINGS

MAIL: GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32203

(1) Sepia of System drawings, for approval.

TO: Mr. Michael Rotell at above mailing address.

ACCOUNT NOS.: 32.10 - $25,611.00
30.10 - $30,050.00

Total Price This Order ---------- $ 55,661.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

06198

FIELD ENGINEERING

PURCHASE ORD

DATE 5/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON I PACKAGES, AND ALL CORRESPO

Item No. | Description and Price

TERMS OF PAYMENT

10% Prepayment payable 15 days after receipt of Drawings Approval, and sign acceptance copy of this order;
60% Payable 15 days after receipt of equipment at Owner's jobsite;
10% Payable 30 days after installation and complete acceptance by Owner's Representative but no later than 45 days after delivery.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

NOTIFICATION OF SHIPMENT

On date of shipment notify Buyer: R. Pawlak (914) 335-6660 with necessary shipping information.

WARRANTY

Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hamann/R. Pawlak c/o mailing address.

06199

FIELD ENGINEERING

DER COMMENT

NO. 6

Information required in Section V, Items 2, 4 and 5 is attached as follows:

Item 2

a. Basis of emission estimate: Refer to attachments under DER Comment No. 5 and calculations in Attachment 3 of the permit application.

b. Proposed test methods: Refer to Attachment 10 of the permit application.

Item 4 - Design details for all air pollution control systems are attached as follows:

Source	Description
1	Drawing No. 6555-5403-2 and description listed on Purchase Order No. 6555-36.
2	Description listed on Purchase Order No. 6555-21, Page 2 of 5, and Drawing Nos. A-168 & B-269.
3	Drawing No. 6555-5404-2.
4	Drawing No. 6555-5305-2
5	Description listed on Purchase Order No. 6555-21, Page 1 of 5 and Drawing No. B-305.

Item 5 - Derivation of control device efficiency:

Source	Description
1	Vendor guarantee dated 8/24/84 (Flex-Kleen).
2	Vendor performance specifications, Purchase Order No. 6555-21, Page 4 of 5.
3	N/A. Water vapor only - no control device.
4	Vendor guarantee dated 8/8/84 (Ducon).
5	Vendor performance specifications, Purchase Order No. 6555-21, Page 3 of 5.
6	Based on tests run by Maxwell House Division Research on 7/19/84 (attached under DER Comment No. 5).

JUN 29 1994

PURCHASE ORD

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO.
6/21/84	Glenview, IL	Dedicated Truck	See Below	9/3/84	6555-21

ORDER NUMBER MUST BE ON I PACKAGES, AND ALL CORRESPO

SELLER: HARDY SYSTEMS CORPORATION
c/o Coastal Kinetics Co.
5610 Green Springs
Houston, TX 77066
Att: Mr. William Perkola 713-893-6836

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32202
Att: Mr. Michael Rotell 904-360-3251

INVOICE TO:

GENERAL FOODS CORPORATION
Central Engineering
P.O. Box 7679
Lafayette, IN 47903
Att: R.D. Long

Item No. Description and Price

Confirming verbal order of 6/5/84 to W. Perkola by M. Rotell/R. Pawlak.

Furnish and deliver One Lot of Pneumatic Conveying Systems in accordance with, but not limited to; the specifications, terms and conditions set forth herein.

1. PRESSURE SYSTEM - As per Seller's 698-67, attached by reference only. SOURCE 5

1 - Hardy Systems Corporation positive pressure pump package complete with a 412 RCS-J Roots Blower, 60 HP, TEFC-XT Reliance motor with a 1.15 service factor, common base, v-belt drive, enclosed guard, pressure relief valve, pressure switch, inlet filter-silencer, discharge silencer, check valve, pressure gage, and all necessary fittings and labor to complete the package.

TAG NO.: 318

1 - Meyer 12 x 12 heavy duty Rota-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 service factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO. 320

1 - Pick-up manifold to fit under the 12 x 12 feeder specified above with 4-½" O.D. plain tube ends.

180' - 4-½" O.D. by 11 gauge mild steel tubing.

Richard Pawlak, Senior Buyer
FIELD ENGINEERING 335-0640

06195

PURCHASE ORDER

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INVOICES, PACKAGES, AND ALL CORRESPONDENCE

Item No. Description and Price

5 - 4-½" O.D. by 11 gauge 90° bends on a 48" centerline radius.

2 - 4-½" O.D. by 11 gauge 90° bends on a 24" centerline radius (air handling only).

80 - 4-3C Norris couplings with white gaskets.

3 - Hardy Systems Corporation 4-½" line diverters, cast iron construction, complete with air operated cylinder, four way solenoid valve, and position limit switches.

TAG NOS.: 401, 402, 403

Price ---------- $ 25,611.00

2. VACUUM SYSTEM - as per Seller's Proposal 84-67, attached by reference only SOURCE 2

1. Stoddered Model F64-5 inlet air filter to be mounted on intake conveying tubing.

TAG NO.: 105

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package complete with a Reliance 1-½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO.: 104

1 - Pickup manifold to fit under the 12 x 12 feeder specified above with 5" O.D. plain tube ends.

180' - 5" O.D. by 11 gauge mild steel tubing.

3 - 5" O.D. by 11 gauge 90° bends on a 60" centerline radius.

5 - 5" O.D. by 11 gauge 90° bends on a 36" centerline radius (air handling only).

32 - 5-3C Norris couplings with white gaskets.

1 - Hardy Systems Corporation cyclone receiver constructed of 12 gauge carbon steel.

TAG NO.: 111

06196

FIELD ENGINEERING

CENTRAL ENGINEERING 250 NORTH ST., WHITE PLAINS, N.Y. 10625

PURCHASE ORDE

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON INV PACKAGES, AND ALL CORRESPOND

Item No. | Description and Price

1 - Meyer 12 x 12 heavy duty, Roto-Flo Feeder package to fit on the cyclone receiver and complete with a Reliance 1½ HP, TEFC-SXT, motor/reducer, with 1.15 Service Factor, chain drive, enclosed metal guard, bevelled rotor edges, TFE chevron packing, and shear baffle.

TAG NO.: 109

1 - Hardy Systems Corporation filter-receiver, model FR7-10, complete with 70 square feet of cloth area, automatic reverse jet cleaning and 60° sloped hopper.

TAG NO.: 113

1 - Meyer 6 x 6 HD Roto-Flo Feeder package to fit on the filter receiver specified above. The feeder package will be complete with a bevelled edged rotor, chain drive, enclosed metal guard, and Reliance ½ HP, TEFC-SXT motor-reducer with 1.0 Service Factor.

TAG NO.: 119

1 - Hardy Systems Corporation vacuum pump package complete with a 418 RCS-J Roots blower, 40 HP, TEFC-XT Reliance motor, with 1.15 Service Factor, common base, v-belt drive, enclosed guard, vacuum relief valve, vacuum switch, discharge silencer, vacuum gage, and all necessary fittings and labor to complete the package.

TAG NO.: 121

Price ---------- $ 30,050.00

Total ---------- $ 55,661.00

PERFORMANCE SPECIFICATIONS SOURCES

The Pressure System is designed to handle 25,000#/hour of green coffee beans with a bulk density of 40#/cubic foot. The material will be transported through 180 feet of 4-½" O.D. by 11 gage conveying tube with 5 90° bends. The material will be dropped into the conveying line through a rotary airlock feeder and discharged into one of three receiving cyclones mounted on storage bins. The conveying air will be discharged through filter boxes mounted on the receiver tops. The cyclone receivers shall be constructed of 12 gage carbon steel and built to Seller's standard design.

06197

FIELD ENGINEERING

CENTRAL ENGINEERING 250 NORTH ST., WHITE PLAINS, N.Y. 10625

PURCHASE ORD

DATE		NO. 6555-21
6/21/84		ORDER NUMBER MUST BE ON IN PACKAGES, AND ALL CORRESPON

Item No. Description and Price

Source 2

The Vacuum System will transport 20,000#/hour of coffee beans through 180 feet of 5" O.D. by 11 gage conveying tubing with 3 90° bends. The material will be deposited in a cyclone receiver and gravity discharged through a rotary airlock feeder. The dust laden air will be filtered in a cloth tube filter.

NOTES:

1. Price(s) do not include freight charges, mechanical or electrical installation, controls, motor starters, startup service, supervision or sales taxes (where applicable).

2. Seller to consolidate all equipment at Seller's Glenview plant for one shipment to the jobsite. Dedicated truck to deliver equipment to jobsite would cost approximately $1,700.00 net.

3. Drawings for approval to be delivered 2-3 weeks after receipt of purchase order.

DRAWINGS

MAIL: GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 E. Bay Street
Jacksonville, FL 32203

(1) Sepia of System drawings, for Approval.

TO: Mr. Michael Rotell at above mailing address.

ACCOUNT NOS.: 32.10 - $25,611.00
30.10 - $30,050.00

Total Price This Order ---------- $ 55,661.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

06198

FIELD ENGINEERING

CENTRAL ENGINEERING 250 NORTH ST., WHITE PLAINS, N.Y. 10625

PURCHASE ORD

DATE 6/21/84

NO. 6555-21

ORDER NUMBER MUST BE ON PACKAGES AND ALL CORRESPO

Item No. Description and Price

TERMS OF PAYMENT

10% Prepayment payable 15 days after receipt of Drawings Approval, and sign acceptance copy of this order;
80% Payable 15 days after receipt of equipment at Owner's jobsite;
10% Payable 30 days after installation and complete acceptance by Owner's Representative but no later than 45 days after delivery.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

NOTIFICATION OF SHIPMENT

On date of shipment notify Buyer: R. Pawlak (914) 335-6640 with necessary shipping information.

WARRANTY

Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hamann/R. Pawlak c/o mailing address.

06199

FIELD ENGINEERING

SOURCE (1)

PURCHASE OR

DATE	FOB	SHIP VIA	TERMS	DELIVERY	NO. 6555-36
5/10/84		Motor Freight	N-30	8/1/84	ORDER NUMBER MUST BE O PACKAGES, AND ALL CORRES

SELLER: THE TENNANT COMPANY
17 Briar Lane, Suite 304
Houston, TX 77207
Att: Mr. Frank Cmajdaka
713-627-8330

SHIP TO: (Prepay All Freight Charges)

GENERAL FOODS CORPORATION
Maxwell House Division (C.E.)
735 East Bay Street
Jacksonville, FL 32203
Att: Mr. Michael Rotell 904-358-3251

DATE RECEIVED 8/30, 19 84
VIA _____ PRO # 6555-36
WEIGHT _____ CHARGES _____ PPD _____
COLL. _____
ITEMS RECEIVED ARE MARKED ✓ OR AS NOTED, INSPECTED & FOUND AS SPECIFIED IN PURCHASE ORDER, EXCEPT AS NOTED.
RECEIVED BY _____
ACCEPTED IN GOOD CONDITION BY _____
CONTRACTOR _____ SIGNATURE _____
COMMENTS: M. Rotell 9/5/84

Item No. Description and Price

Confirming verbal order of 8/10/84 to F. Cmajdaka by L. Hasann/R. Pawlak.

Furnish and deliver One Dust Collector in accordance with, but not limited to, the specifications, terms and conditions set forth herein.

✓ 1 - Model PVTL-16 Flex-Kleen Complete Dust Collector, 720 square feet of filter cloth area, providing an air-to-cloth ratio of 2.77/1 at 2000 ACFM.

The unit to include the following:

- 12 GA. welded steel housing capable of operating pressure of 17" W.G. positive or negative.
- Stub pipe gas outlet.
- Compressed air header assembly, complete with aluminum diaphram.
- Valves and solenoid pilot valves, all prepiped and prewired into a NEMA 4 box on the header.
- Astro-Flex electronic sequential timer shipped separately for field installation in the box on the header and for easy wiring of the solenoids.
- Internal air piping, die-cast aluminum venturi nozzles, 1/8" minimum section.
- Stainless steel bag clamps.
- Air pressure gauge. Pressure differential gauges.
- Quick access man door.
- Pyramid hopper, with 60 Deg. sloping sides, including stub piping inlet, corner saddle supports and flanged dust outlet.

05459

Richard Pawlak, Buyer
RECEIVING (914) 335-6040

PURCHASE ORI

DATE		NO. 6535-38
5/10/64		ORDER NUMBER MUST BE ON PACKAGES, AND ALL CORRESP

Item No. Description and Price

- Inlet baffle.
- Support legs 2' clearance below hopper outlet flange.
- Side bag removal in lieu of top bag removal.
- Fire protection water spray nozzles to be located inside of collector. Nozzle will be prepiped to a single connection with controls and valves by Owner.
- 8" Meyer rotary air lock.

TAG NO.: 6101 - Bag House
6102 - Airlock

ACCOUNT NO.: 32.10

Price ---------- $ 7,835.00

Total Price This Order (excluding taxes and freight) ---------- $7,835.00

TAXES - Bill applicable sales or use tax as separate amount on invoice.

FREIGHT - Prepay and show as separate amount on invoice and attach a copy of freight bill.

PREPARATION FOR SHIPMENT

Tagging - Each piece of equipment is to be suitably identified with a metal and/or other durable weatherproof tag bearing the appropriate tag number and the Purchase Order Number. In the event that pieces or subassemblies are shipped separately, the same instruction shall apply with additional identification of "Part of (Tag Number)".

Preparation - Provide all bracing, crating and other protection required to ensure satisfactory shipment. Durably mark, in 1" minimum letters, the Tag Number(s) and Purchase Order Number on the outside of each box, crate, skid or other containers of each shipment. The same identification shall be shown on packing slips, bills of lading and invoices.

Any extra costs due to improper tagging, handling and re-delivery or lack of notification shall be to Seller's account.

WARRANTY

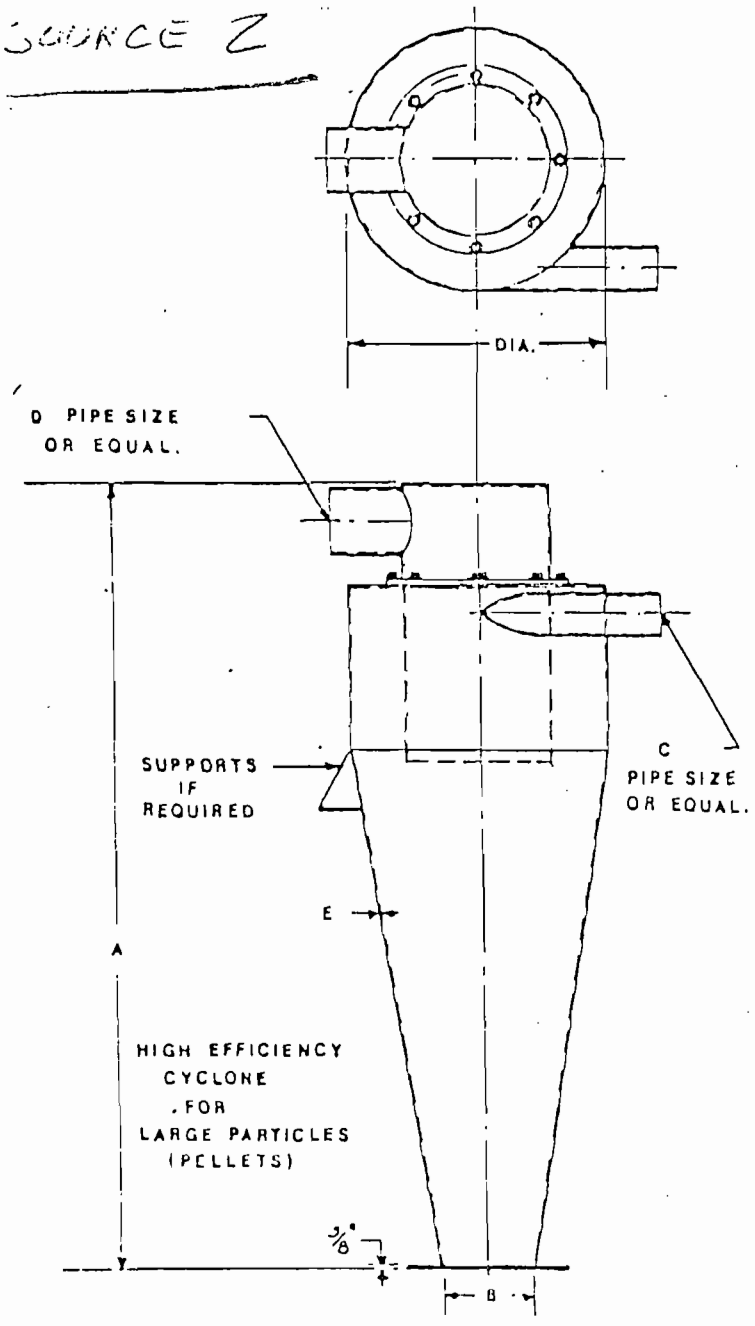
Seller warrants the goods to be free from defects in materials and workmanship, and guarantees to repair and/or replace, at Seller's expense, any part thereof which is found by Buyer to be defective within a period of 1 year from date of installation or 18 months from date of shipment, whichever is earlier.

CORRESPONDENCE - Address all correspondence to: L. Hamann/B. Pawlak c/o mailing address.

05460

RECEIVING

SOURCE 2



DIA	CFM	DIMENSIONS (In Inches)				
		A	B	C	D	E Gauge
10	120	32	4	1 - 2½	2 - 3	10
12	170	41	6	2 - 3	2 - 3½	10
14	240	44	6	2 - 3½	3 - 4	10
16	310	50	8	3 - 4	4 - 5	10
18	380	54	8	3 - 4	4 - 5	10
20	480	63	8	3½ - 5	4 - 6	10
22	580	72	10	4 - 5	6	10
26	800	83	12	6 - 7	8	10
30	1070	95	12	6 - 8	10	10
32	1250	101	12	8	10	10
38	1720	121	14	8 - 9	12	10
40	1900	128	14	10	12	10
44	2300	140	16	10 - 12	14	10

PRELIMINARY!
DO NOT USE THIS PRINT FOR FABRICATION

MATERIALS OF CONSTRUCTION
MILD STEEL
STAINLESS STEEL
ALUMINUM

ACCESSORIES AND ALTERNATES
FLANGED INLET AND OUTLET
SCREENED OUTLET
SUPPORTS
ACCESS OPENINGS
VIEW PORTS
LEVEL INDICATORS
SPECIAL PAINT

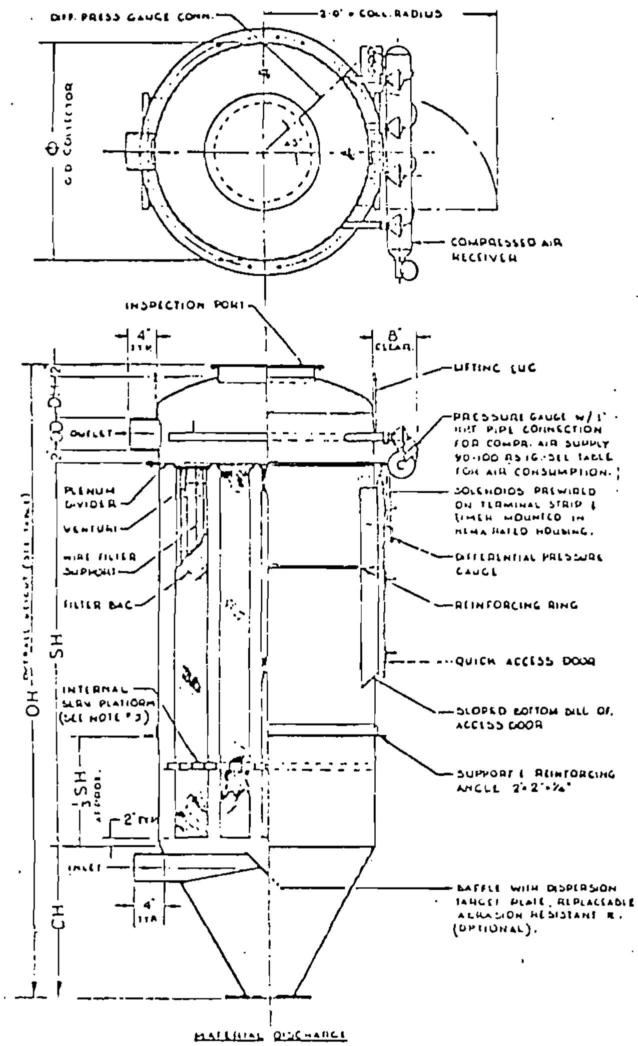
HARDY SYSTEMS CORPORATION
CHICAGO, ILLINOIS

TYPICAL CYCLONE RECEIVER

SCALE	DATE
NONE	4-18-82
DRAWN BY: JS	DRAWING NO. A-168
APPROVED BY	

SOURCE 2

BEST AVAILABLE COPY



MODEL	FR 4-5	4-7	FR 7-5	7-7	7-10	FR 9-5	9-7	9-10	FR 12-5	12-7	12-10	FR [illegible]	[illegible]	FR [illegible]	[illegible]	FR [illegible]	[illegible]
FILTER AREA (SQ FT)	20	30	35	52.5	70	45	67.5	90	60	90	120	120	150	[illegible]	180	[illegible]	[illegible]
NUMBER OF BAGS	4	4	7	7	7	9	9	9	12	12	12	16	16	[illegible]	[illegible]	25	[illegible]
BAG LENGTH (IN.)	45	68	45	68	90	45	68	90	45	68	90	[illegible]	[illegible]	[illegible]	90	[illegible]	90
Φ (OUTSIDE DIA. IN.)	18	18	24	24	24	30	30	30	36	[illegible]	36	[illegible]	[illegible]	42	42	48	48
O.H. (OVERALL HEIGHT) + O.D. OUTLET + LEAD [illegible]	5'-4½	7'-3½	5'-10	7'-9½	9'-1½	6'-4	8'-3	10'-1	6'-4	8'-5	10'-1	6'-5	10'-1	[illegible]	[illegible]	[illegible]	[illegible]
SH (SHELL HEIGHT IN)	47	70	47	70	92	47	70	92	47	70	92	70	92	70	92	70	92
C.H. (CONE HEIGHT IN)	8½	8½	13½	13½	13½	19½	19½	19½	19½	19½	19½	24½	24½	29½	29½	34½	34½
D.H. (DISHED HD HT IN)	4	4	5	5	5	5	5	5	5	5	5	6	6	6	6	7	7
VOLUMETRIC DISPLACEMENT INCL. CLEAN AIR CHAMB. [illegible]	8.8	12.2	16.5	22.5	28.4	26.4	33.5	45	[illegible]	[illegible]	45	55	66.5	[illegible]	[illegible]	[illegible]	124
COMPR. AIR REQMT (SCFM)	3.0	3.2	3.4	3.6	3.8	4.2	4.6	[illegible]	[illegible]	5.7	6.0	6.3	6.5	6.7	7.0	[illegible]	[illegible]
NO OF SOLENOID VALVES	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	7	7
PRESS RATING (IN. HG)	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
RISING (CAN) VELOCITY FT/MIN @ 3/1 RATIO	63	129	78	111	157	62	93	159	92	159	105	124	166	95	127	104	[illegible]
NET WT LBS APPROX.	[illegible]	570	570	610	650	695	[illegible]	820	[illegible]	[illegible]	1040	[illegible]	1145	1270	1350	[illegible]	[illegible]

MODEL	FR 32-7	32-10	FR 42-7	42-10	FR 49-7	49-10	FR 56-7	56-10	FR 64-7	64-10	FR 82-7	82-10	FR [illegible]	[illegible]	FR [illegible]	[illegible]
FILTER AREA (SQ FT)	240	320	315	420	367.5	450	420	560	480	640	[illegible]	820	675	900	[illegible]	[illegible]
NUMBER OF BAGS	32	32	42	42	49	49	56	56	64	64	82	82	90	90	[illegible]	[illegible]
BAG LENGTH (IN.)	68	90	68	90	68	90	68	90	68	90	68	90	68	90	68	90
Φ (OUTSIDE DIA. IN.)	54	54	60	60	66	66	72	72	78	78	84	84	90	90	96	96
O.H. (OVERALL HEIGHT) + O.D. OUTLET + [illegible]	10'-5½	12'-7½	11'-4	13'-3	[illegible]	13'-9½	12'-6½	[illegible]	13'-2½	15'-0½	13'-8½	15'-6½	[illegible]	[illegible]	[illegible]	[illegible]
S.H. (SHELL HEIGHT IN)	70	92	70	92	70	92	70	92	70	92	70	92	70	92	70	92
C.H. (CONE HEIGHT IN)	39½	39½	45	45	50½	50½	55½	55½	60½	60½	65½	65½	72½	72½	[illegible]	[illegible]
D.H. (DISHED HD HT. IN)	8	8	9	9	10	10	10	10	11	11	12	12	13	13	14	14
VOLUMETRIC DISPLACEMENT INCL. CLEAN AIR CHAMBER [illegible]	141	172	174	212	217	260	261	313	[illegible]	[illegible]	[illegible]	435	427	506	[illegible]	[illegible]
COMPR. AIR REQMT. (SCFM)	9.5	10.2	11.4	11.6	11.8	11.9	10.6	[illegible]	11.0	11.5	12.3	12.6	13.0	13.6	14.2	[illegible]
NO OF SOLENOID VALVES	7	7	9	9	9	9	8	8	8	8	10	10	10	10	12	12
PRESS. RATING (IN. HG)	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
RISING (CAN) VELOCITY FT/MIN @ 3/1 RATIO	110	146	115	153	106	141	106	157	102	132	114	152	105	142	115	[illegible]
NET WT. LBS. APPROX.	1687	1805	1995	2190	2345	2625	2705	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

CLOTH AIR RATIO 2:16

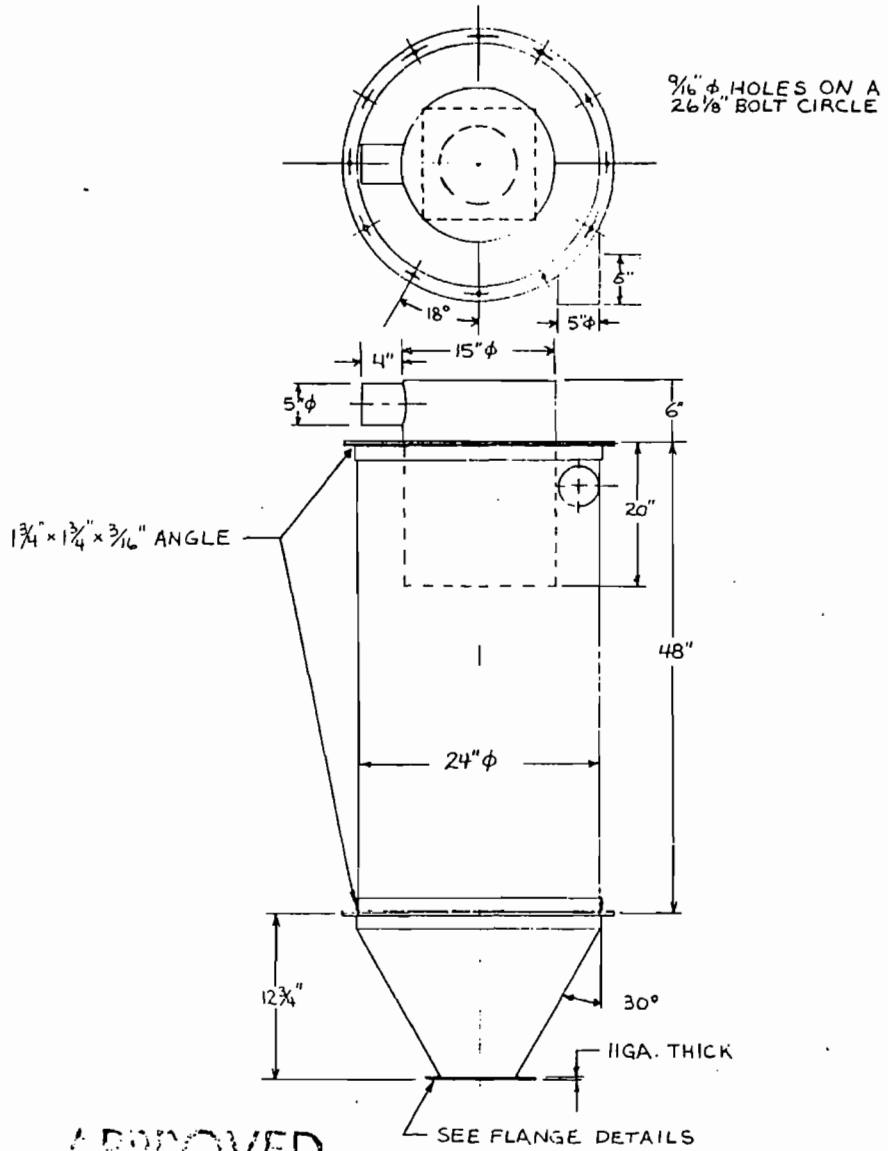
NOTES:

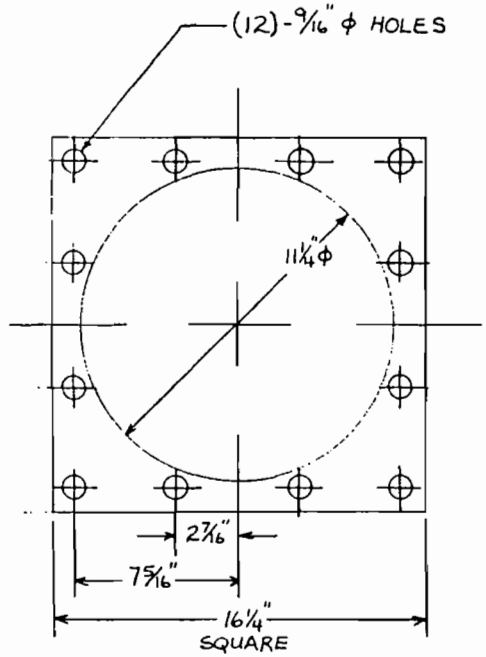
1. INLET SIZE SHALL BE BASED ON RECOMMENDED 4,000-5000 FT/MIN. VELOCITY.
2. OUTLET SIZE SHALL BE BASED ON RECOMMENDED 3000-4000 FT/MIN. VELOCITY.
3. CLEAN AIR PLENUM HEIGHT IS DETERMINED BY OUTLET O.D. (MINIMUM HEIGHT 10")
4. CONE HEIGHT DIMENSIONS ARE BASED ON AN 8" I.D. MATERIAL DISCHARGE FLANGE (OTHER SIZES ARE AVAILABLE).
5. COLLECTOR MODELS OVER 5'-0" DIA. SHALL HAVE INTERNAL SERVICE PLATFORM
6. COMPRESSED AIR CONSUMPTION ASSUMES PROPER SIZING OF DUST COLLECTOR.
7. UNITS OVER 8'-0" DIA. ARE AVAILABLE
8. CAN BE BE FURNISHED TO WITHSTAND 17" OF HG NEG PRESSURE SO THE FILTER-COLLECTOR MAY BE THE PRIMARY COLLECTOR IN A NEGATIVE PRESSURE AIR CONVEYING SYSTEM.

HARDY SYSTEMS CORPORATION
CHICAGO, ILLINOIS

GENERAL DATA
FILTER RECEIVER — SERIES "FR"

SCALE	DATE
NONE	4-1-81
DRAWN BY: N.B.	DRAWING NO.
APPROVED BY: E.B.	B-269





APPROVED:

By: R. Notley

Date: 6-18-84

HARDY SYSTEMS CORPORATION
CHICAGO, ILLINOIS

24" ϕ CYCLONE RECEIVER
GENERAL FOODS CORPORATION

				SCALE NONE	DATE 6-8-84
				DRAWN BY JS	DRAWING NO. B-305
				APPROVED BY	

SOURCE 5

One NorthWestern Center
165 North Canal Street, Chicago, Illinois 60606
312/648-5300 Telex 254254

SOURCE 1

Flex-Kleen
Research-Cottrell

The Tennant Company
17 Briar Hollow Lane, Suite 304
Houston, Texas 77027
(713) 627-8330

August 24, 1984

General Foods, Inc.
Maxwell House Plant
735 East Bay Street
Jacksonville, FL 32203

Attention: Mr. Mike Rotell

Reference: Dust Collector
PO #6555-36

Gentlemen:

Per your request the guaranteed efficiency of this collector will be 99.9% removal of particles in excess of 2 microns.

If you have any further questions, please let us know.

Very truly yours,

FLEX-KLEEN CORPORATION

A. Frank Cmajdalka
Houston Office

AFC/clb

cc: F/K

DUCON ENVIRONMENTAL

A DIVISION OF THE DUCON COMPANY INCORPORATED

August 8, 1984

Maxwell House Division
General Foods Corporation
P.O. Box 2010
Jacksonville, Florida 32203

Attention: Mr. Jim Hellier

Reference: Ducon Contract C84-0297

Dear Sir:

We wish to confirm the efficiency prediction of the Size 890 VM 810 Duclone given to Miss Dianne Sarlo previously.

Based upon the distribution of the material, as shown on the included curve, we expect an efficiency of 99.8 percent recovery.

We trust this information is useful to you. If you have need of further assistance please contact us.

Very truly yours,

THE DUCON COMPANY, INC.

Frank Teevan

FT:cg
Encl.
cc: Mr. Phil Dohl
Proctor & Schwartz
251 Gibraltar Road
Horsham, PA 19044

cc: Air Engineering Systems
Chadds Ford, PA

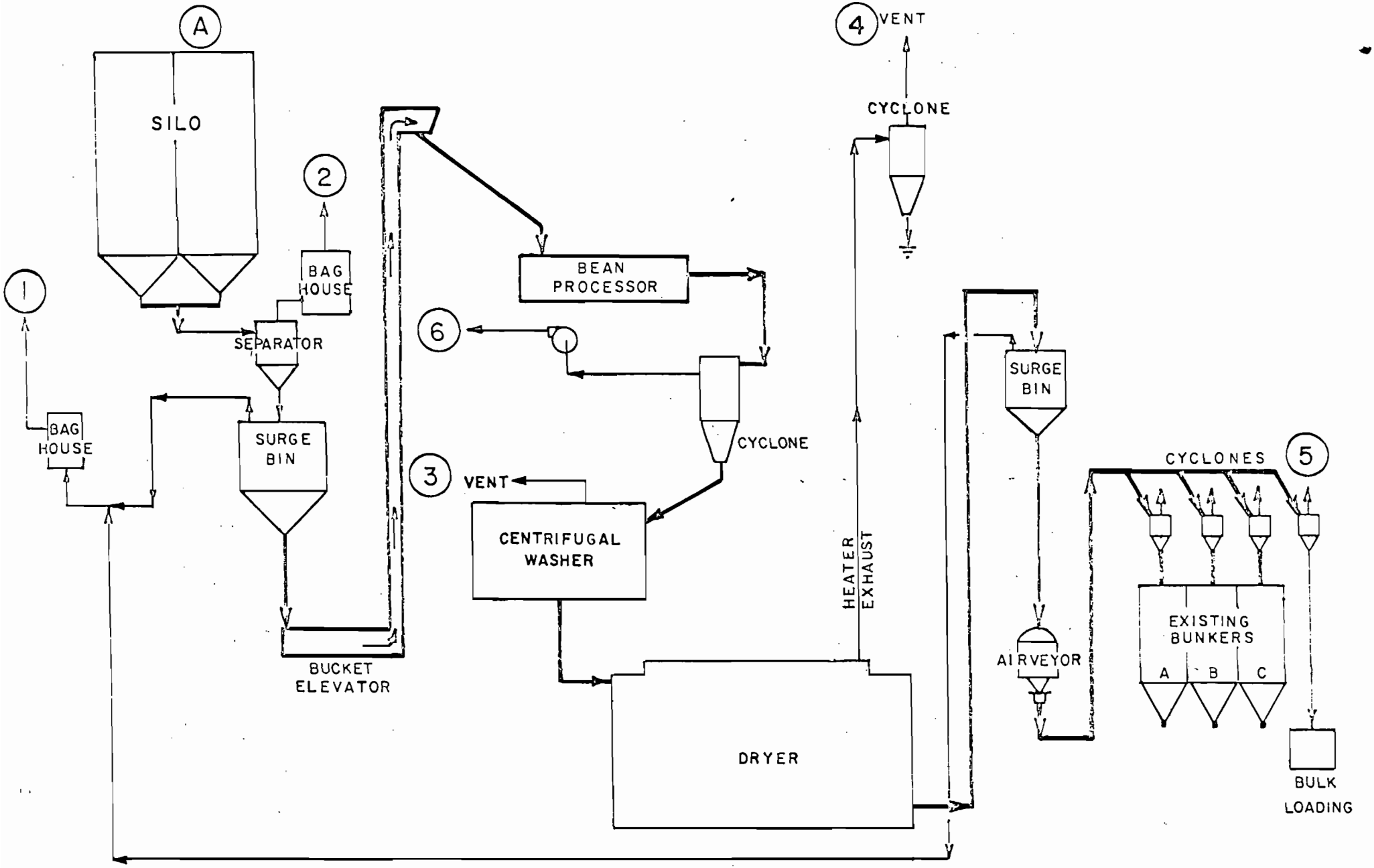
147 EAST SECOND STREET MINEOLA, NEW YORK 11501 TEL: 516 741-6100 TWX 510 222-9251

COURSE 4.

DER COMMENT

NO. 7

As requested, a non-confidential flow diagram is attached.



PROCESS FLOW DIAGRAM

COFFEE PROCESSING

MAXWELL HOUSE DIVISION - GENERAL FOODS

No. 0156558

RECEIPT FOR CERTIFIED MAIL

**NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL**

(See Reverse)

SENT TO: Mr. Robert T. Marek	
STREET AND NO.	
P.O., STATE AND ZIP CODE	
POSTAGE	$
CERTIFIED FEE	¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM AND DATE DELIVERED	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$
POSTMARK OR DATE	

CONSULT POSTMASTER FOR FEES

OPTIONAL SERVICES

9/6/84

PS Form 3800, Apr. 1976

PS Form 3811, Jan. 1978

SENDER: Complete items 1, 2, and 3.
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
   - ☒ Show to whom and date delivered. ..... ¢
   - ☐ Show to whom, date and address of delivery. ..... ¢
   - ☐ RESTRICTED DELIVERY
     Show to whom and date delivered ..... ¢
   - ☐ RESTRICTED DELIVERY.
     Show to whom, date, and address of delivery. $

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. Robert T. Marek
735 E. Bay Street
Jacksonville, FL 32202

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	0156558	

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐Addressee ☐Authorized agent

4. DATE OF DELIVERY: SEP 10 1984 POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-459

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

September 6, 1984

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Robert T. Marek, Plant Manager
Maxwell House Division, General Foods
735 East Bay Street
Jacksonville, Florida 32202

Re: Construction Permit Application AC 16-090996

Dear Mr. Marek:

The department has received your application to construct a coffee processing line at your existing facility. After our initial review, we have deemed this application incomplete. In order to process this application, the following information must be received.

1. Provide a letter of authorization as required in Section I A of the application form.

2. Provide the water vapor content and velocity for each source as required in Section III H of the application form.

3. Are the flow rates given on attachment 3, for sources 1 and 5, total flow rates or individual flow rates? Please clarify?

4. Confirm the stack diameter for source 4 given in attachment 3.

5. Provide documentation for all emission factors used in the calculations in attachment 2.

6. Provide all information required in Section V items 2, 4 and 5 of the application form.

7. As discussed in our meeting on August 22, 1984, provide a complete application form, calculation and attachments, including a flow diagram, which will not reveal trade secrets and include any confidential material as separate attachments.

When all the requested information is received, we will resume processing your application. If you have any questions on its status, please call Edward Svec, Review Engineer, at (904) 488-1344 or write to me at the above address.

Sincerely,

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

CHF/ES/agh

Attachments

cc: Lloyd Stebbins, P.E., Reynolds, Smith and Hills
Jerry Woosley, Bio-Environmental Services
Doug Dutton, Northeast District

HOPPING BOYD GREEN & SAMS
ATTORNEYS AND COUNSELORS
SUITE 420, LEWIS STATE BANK BUILDING
POST OFFICE BOX 6526
TALLAHASSEE, FLORIDA 32314
(904) 222-7500

CARLOS ALVAREZ
BRIAN H. BIBEAU
WILLIAM L. BOYD, IV
PETER C. CUNNINGHAM
WILLIAM H. GREEN
WADE L. HOPPING
RICHARD D. MELSON
WILLIAM D. PRESTON
GARY P. SAMS
ROBERT P. SMITH, JR.

ELIZABETH C. BOWMAN
RICHARD S. BRIGHTMAN
FRANK E. MATTHEWS
STEVEN A. MEDINA
CAROLYN S. RAEPPLE

OF COUNSEL
W. ROBERT FOKES

September 6, 1984

DER
SEP 6 1984
BAQM

Mr. Clair Fancy, P.E.
Bureau of Air Quality
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Re: Maxwell House Division, General Foods Corporation
Air Source Construction Permit Application
Green Bean Processing Line
Jacksonville Coffee Plant

Dear Mr. Fancy:

By letter dated August 3, 1984, an air source construction permit application for the addition of a coffee processing operation at Maxwell House's Jacksonville Coffee Plant was filed with Mr. Jerry Woosley of the Jacksonville Department of Health, Welfare and Bio-Environmental Services (BES). Maxwell House was subsequently advised that the permit application would be processed by DER's Bureau of Air Quality Management (BAQM) in Tallahassee. Accordingly, on August 22, 1984, representatives of the Maxwell House Division of General Foods Corporation met with Bill Thomas and Ed Svec of BAQM and Assistant General Counsel Nancy Wright to explain the need for expeditious processing of the permit and to respond to any initial questions on the application. At that meeting, it was agreed that the best course of action to ensure a smooth permitting effort would be for Maxwell House to submit a new application with additional information and certain other revisions.

In accordance with our discussions with Bill Thomas, Ed Svec and Nancy Wright, enclosed for filing please find the original and four copies of an air source construction application for the proposed addition of a coffee processing line at the Jacksonville Coffee Plant, forwarded on behalf of the Maxwell House Division of General Foods Corporation. The enclosed application entirely replaces the application transmitted on August 3, 1984. Because this new application is a complete replacement for the previously filed application, I hereby request that the BAQM destroy all copies of the August 3, 1984 application in its possession. Likewise, by copy of this letter to Mssrs. Jerry Woosley and John Brown, I hereby request that all copies of

the August 3, 1984 application in the possession of the Jacksonville BES or the DER's Northwest District office be destroyed and replaced with the enclosed.

Please note that Maxwell House has requested confidential treatment of certain specified portions of the enclosed permit application, pursuant to Section 403.111, Florida Statutes. This request was discussed with the DER representatives at our meeting on August 22, 1984, and I trust that the specified proprietary information will be afforded confidential treatment in accordance with the Agency's normal procedures.

Your consideration in this matter is much appreciated, as is anything you can do to expedite the processing of this permit application. Please do not hesitate to call me if you have any questions.

Sincerely,

Peter C. Cunningham

PCC/gs
Enclosure

cc: Jerry Woosley (w/ enclosure)
John Brown (w/enclosure)
Bill Thomas (w/o enclosure)
Ed Svec (w/ enclosure)
Nancy Wright (w/o enclosure)

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

DER

SEP 6 1984

BAQM

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

G. DOUG DUTTON
DISTRICT MANAGER

SEE ATTACHED CONFIDENTIALITY STATEMENT

APPLICATION TO ~~OPERATE~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Coffee Processing [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Maxwell House Division, General Foods COUNTY: Duval

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Coffee Processing

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: Robert T. Marek, Plant Manager

APPLICANT ADDRESS: 735 East Bay Street, Jacksonville, Florida

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Maxwell House Division, General Foods Corporation

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

*Attach letter of authorization

Signed: Robert T. Marek

Robert T. Marek, Plant Manager
Name and Title (Please Type)

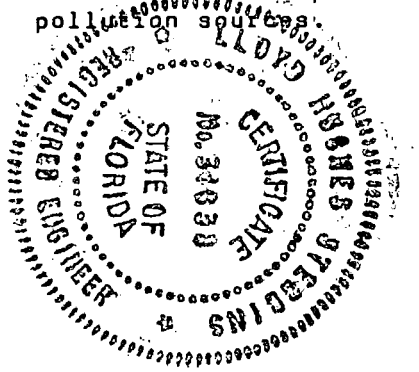
Date: 9/4/84 Telephone No. 904/358-3251

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

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

[1] 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 _____

Lloyd Stebbins
Name (Please Type)

Reynolds, Smith and Hills
Company Name (Please Type)

Post Office Box 4850, Jacksonville, Florida 32201
Mailing Address (Please Type)

Florida Registration No. 31838 Date: 9/4/84 Telephone No. 904/739-2000

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 flow diagram, "Coffee Processing"

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

Start of Construction August 1984 Completion of Construction August 1985

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.)

1) Baghouse $7,900 2) Baghouse $29,400 3) Vent - No Control

4) Collector $25,500

5) Cyclones - 4 x $2,500 = $10,000 6) Condenser $50,000

TOTAL: $122,800

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

Does Not Apply

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 _____

Lloyd Stebbins
Name (Please Type)

Reynolds, Smith and Hills
Company Name (Please Type)

Post Office Box 4850, Jacksonville, Florida 32201
Mailing Address (Please Type)

Florida Registration No. 31838 Date: 9/4/84 Telephone No. 904/739-2000

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TOTAL: $122,800

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

Does Not Apply

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. VOC's , 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 Deterioriation" (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? VOC's & 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.

*The sources of particulate emissions documented in this application are exempt from RACT requirements according to Rule 17-2.650(2)(b)3. Each source emits less than one ton of particulates per year. The sole exception is source number four which will be treated as a RACT source.

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

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

****CONFIDENTIAL - SEE ATTACHMENT 1A****

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

B. Process Rate, if applicable: (See Section V, Item 1) ***CONFIDENTIAL - SEE ATTACHMENT 1B****

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)

* * * * * *SEE ATTACHMENT 2A * * * * *

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per 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	

[1]See Section V, Item 2.

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

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

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

****CONFIDENTIAL - SEE ATTACHMENT 1A****

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

B. Process Rate, if applicable: (See Section V, Item 1) ***CONFIDENTIAL - SEE ATTACHMENT 1B****

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)

* * * * * *SEE ATTACHMENT 2A * * * * *

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per 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	

[1]See Section V, Item 2.

[2]Reference 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)

[3]Calculated from operating rate and applicable standard.

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

* * * * * *SEE ATTACHMENT 2B* * * * * *

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

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 DOES NOT APPLY

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
N/A			

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

Fuel Analysis: Does not apply

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average N/A Maximum N/A

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

Baghouse and cyclone coffee dust is collected and sent to landfill.

8 gpm condenser water sent to sewer.

* * * *SEE ATTACHMENT 4* * * *

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

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 Diamter: _____ 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) _____

* * * *SEE ATTACHMENT 4* * * *

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

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 Diamter: _____ 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

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

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

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

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:

[1]Explain method of determining efficiency.
[2]Energy 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:

[1]Explain method of determining efficiency.
[2]Energy 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:

[1]Explain method of determining efficiency.
[2]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:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

*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.

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.

ATTACHMENT 2A

C. Airborne Contaminants Emitted:

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per 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	0.06	0.25	0.03gr/dscf	0.507	23940	11.97	1
Particulates	0.017	0.071	"	0.264	7140	3.57	2
Particulates	0.01	0.042	"	0.534	84	0.042	3
Particulates	4.5	18.90	"	6.28	126000	63.0	4
Particulates	0.164	0.689	"	0.082*	4595*	2.3*	5
V.O.C.'s	0.864	3.63	N/A	N/A	50400	25.2	6

*Total emissions for four intermittent sources generating for one year.

ATTACHMENT 2B

D. Control Devices:

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
1 Baghouse Flex-Kleen Model PVTL-16	Particulates	98%	10-200	Industrial Standard
2 Baghouse-Coastal Kinetics Co.,Model FR7-10	Particulates	98%	10-200	"
3 Carter Day Vent	Water Vapor	85.6%	N/A	Calculations based on test
4 Ducon Cyclone Model 810	Particulates	90%	40-800	Industrial Standard
5 Self-Fab Cyclones	Particulates	70%	10-200	"
6 Condensor Vent	VOC	N/A	N/A	"

ATTACHMENT 3

CALCULATIONS FOR COFFEE PROCESSING

APPLICATION PAGE 4 OF 12

SOURCE No. 1

EMISSIONS

BAGHOUSE EMISSION RATE BASED ON ESE BAG HOUSE TEST DATED 4-17-81 (ATTACHMENT-9)

RATE = 0.057 lbs./Hr. ≈ 0.06 lbs./Hr.

TONS/YR. = 0.06 x (7 X 24 X 50 = 8400) =

504 lbs./YR. x $\frac{1}{2000}$ = 0.25 TONS/YR.

ALLOWABLE EMISSIONS

2000 ACFM x $\frac{532°R}{540}$ = 1,970 DSCFM

1,970 DSCFM x 0.03 gr./DSCF [F.A.C. 17-2.650(2)(c)12.b] x 60 x $\frac{1}{7000}$ = 0.507 lbs./Hr.

POTENTIAL EMISSIONS

BAGHOUSE EMISSION RATE BASED ON ESE BAG HOUSE TEST DATED 4-17-81 (ATTACHMENT-9)

ASSUME EMISSION = 0.057 lbs./Hr.

BAGHOUSE 98% EFF.

2 % MATERIAL TO BAGHOUSE = 0.057 lbs./Hr.

lbs/Hr. MATERIAL = $\frac{0.057}{0.02}$ = 2.85 lbs./Hr.

2.85 lbs./Hr. x 8400 Hrs./YR. x $\frac{1}{2000}$ = 11.97 TONS/YR.

SOURCE No. 2

EMISSIONS

BAGHOUSE EMISSION RATE BASED ON ESE BAGHOUSE TEST DATED 4-17-81 (ATTACHMENT-9)

RATE = 0.017 lbs./Hr.

TONS/YR. = 0.017 lbs./Hr. x 8400 Hrs./YR. x $\frac{1}{2000}$ = 0.071 TONS/YR.

ALLOWABLE EMISSIONS

$1040 \text{ ACFM} \times \frac{532^\circ R}{540} = 1{,}025 \text{ DSCFM}$

$1{,}025 \text{ DSCFM} \times 0.03 \text{ gr./DSCF [F.A.C. 17-2.650(2)(c)12.b]} \times 60 \times \frac{1}{7000} = 0.264 \text{ lbs./Hr.}$

POTENTIAL EMISSION

ASSUME EMISSION = 0.017 lbs./Hr.

BAGHOUSE 98 % EFF.

2 % MATERIAL TO BAGHOUSE = 0.017 lbs./Hr.

lbs./Hr. MATERIAL = $\frac{0.017}{0.02} = 0.85$ lbs./Hr.

$0.85 \text{ lbs./Hr.} \times 8400 \text{ Hr./YR.} \times \frac{1}{2000} = 3.57 \text{ TONS/YR.}$

SOURCE No. 3 - DECHAFFER VENT

EMISSIONS

NO TEST DATA AVAILABLE. ASSUME 0.01 lbs/Hr. PARTICULATES.

TONS/YR. = $0.01 \text{ lbs./Hr.} \times 8400 \text{ Hrs./YR.} \times \frac{1}{2000} =$ 0.042 TONS/YR.

ALLOWABLE EMISSIONS

$2500 \text{ ACFM} \times \frac{532^\circ R}{640} = 2{,}078 \text{ DSCFM}$

$2{,}078 \text{ DSCFM} \times 0.03 \text{ gr./DSCF} \times 60 \times \frac{1}{7000} =$ 0.534 lbs./Hr.

POTENTIAL EMISSIONS

$0.01 \text{ lbs./Hr.} \times 8400 \text{ Hrs./YR.} = 84 \text{ lbs./YR.} \times \frac{1}{2000} =$ 0.042 TONS/YR.

SOURCE No. 4

EMISSIONS

LOADING TO CYCLONE = 15 lbs./Hr. (ESTIMATED BY DIVISION ENGINEERING).

CYCLONE WILL REMOVE A MINIMUM OF 70 %

EMISSION = 15 lbs./Hr. × 0.3 = 4.5 lbs./Hr.
4.5 lbs./Hr. × 8400 Hrs./YR. = 37,800 lbs./YR.
37,800 lbs./YR. × $\frac{1}{2000}$ = 18.9 TONS/YR.

ALLOWABLE EMISSIONS
30,000 ACFM @ 196° F
30,000 ACFM × $\frac{532°R}{654}$ = 24,404 DSCFM
24,404 DSCFM × 0.03 gr./DSCF × 60 × $\frac{1}{7000}$ = 6.28 lbs./Hr.

POTENTIAL EMISSIONS
15 lbs/Hr. = ESTIMATE OF PARTICULATE LOADING TO CYCLONE FROM DIVISION ENGINEERING
15 lbs./Hr. × 8400 Hrs./YR. = 126,000 lbs./YR.
126,000 lbs./YR. × $\frac{1}{2000}$ = 63.0 TONS/YR.

SOURCE No. 5 – BUNKER CYCLONES

EMISSIONS
EMISSION RATE BASED ON ESE TEST DATA DATED 4-17-81 (ATTACHMENT - 9)
RATE = 0.164 lbs./Hr.
0.164 lbs./Hr. × 8400 Hr./YR. × $\frac{1}{2000}$ = 0.689 TONS/YR.

ALLOWABLE EMISSIONS
337 ACFM × $\frac{532°R}{560}$ = 320 DSCFM
320 DSCFM × 0.03 gr./DSCF × 60 × $\frac{1}{7000}$ = 0.082 lbs./Hr.

POTENTIAL EMISSIONS
ASSUME 70% CYCLONE EFF.
0.164 lbs./Hr. = 30 % EMISSIONS
$\frac{0.164}{.30}$ = 0.547 lbs./Hr.
0.547 lbs./Hr. × 8400 Hrs./YR. = 4595 lbs./YR.
4595 lbs./YR. × $\frac{1}{2000}$ = 2.3 TONS/YR.

SOURCE No. 6

ESTIMATED EMISSIONS BASED ON PILOT PLANT TESTING BY MAXWELL HOUSE DIVISION RESEARCH AT HOBOKEN, NEW JERSEY

BASED ON PROCESS WEIGHT OF 12,500 lbs./Hr.
TOTAL HYDROCARBONS PRIOR TO CONDENSER = 5 lbs./Hr.; TOTAL EMISSIONS FROM CONDENSER OPERATING @120°F = 0.72 lbs./Hr. VOC; PERMIT @ 15,000 lbs./Hr.

$$\text{VOC} = \frac{15,000}{12,500} \times 0.72 = 0.864 \text{ lbs./Hr.}$$

$$0.864 \text{ lbs./Hr.} \times 8400 \text{ Hr./YR.} \times \frac{1}{2000} = 3.63 \text{ TONS VOC/YR.}$$

ALLOWABLE EMISSIONS

N/A

POTENTIAL EMISSIONS

ESTIMATED EMISSIONS BASED ON PILOT PLANT TESTING AT MAXWELL HOUSE DIVISION RESEARCH AT HOBOKEN, NEW JERSEY
EMISSIONS = 5 lbs/Hr. VOC BEFORE CONDENSING

$$5 \text{ lbs./Hr.} \times \frac{15,000}{12,500} = 6 \text{ lbs./Hr.}$$

$$6 \text{ lbs./Hr.} \times 8400 \text{ Hr./YR.} = 50,400 \text{ lbs./YR.}$$

$$50,400 \text{ lbs./YR.} \times \frac{1}{2000} = 25.2 \text{ TONS/YR.}$$

ATTACHMENT 4

H. Emission Stack Geometry and Flow Characteristics:

SOURCE	STACK HEIGHT (FT)	STACK DIAMETER	FLOW (ACFM)	FLOW (DSCFM)	EXIT TEMP. (^{o}F)
1	80	12"	2,000	1,970	80
2	100.5	9"	1,040	1,025	80
3	82	12"	2,500	2,078	180
4	76	1.33'X14'	30,000	24,404	130
5	100.75	13.75"	337	319	100
6	100	6"	40	32	200

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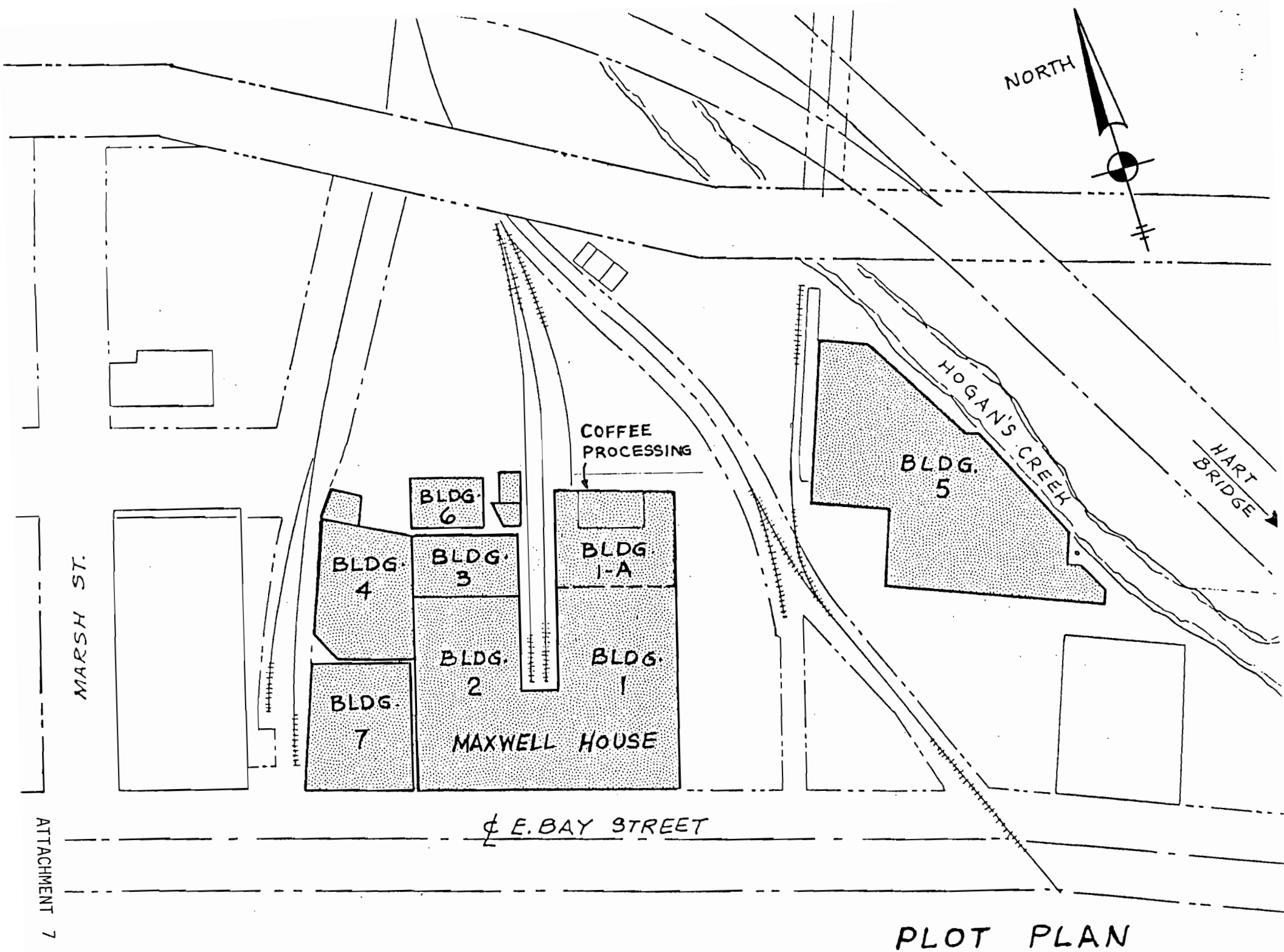
ATTACHMENT 6



PLOT PLAN

ATTACHMENT 7

MAXWELL HOUSE COFFEE DIVISION
GENERAL FOODS CORPORATION
JACKSONVILLE, FLORIDA

PROPOSED
OPERATION AND MAINTENANCE PLAN

PERMIT NUMBER			
PROCESS	Coffee Processing		
EQUIPMENT NAME	Cyclone		
MANUFACTURER'S NAME	Ducon Model 810 Cyclone		
FUEL	Not Applicable		
OPERATION	Hours/Day	Days/Week	Weeks/Year
	24	7	50

Processed coffee after being discharged from the bean processor is pressure washed in the dechaffer to remove chaff. The coffee will then be dried in the multi-stage drier which utilizes low velocity air to reduce entrainment of dust particles. The cyclone is designed by the Ducon Company to remove most of the remaining particulates.

MAINTENANCE PLAN	The cyclone will be checked visually daily and any malfunctions will be corrected.
MAINTENANCE SCHEDULE	A visual check of the cyclone will be conducted once each day by operating personnel.
PERFORMANCE DATA	Not Applicable
TESTING REQUIREMENTS	Visible Emissions: Once per year - One unit

A REPORT ON
PARTICULATE EMISSIONS TESTS

MAXWELL HOUSE COFFEE DIVISION
GENERAL FOODS CORPORATION

Jacksonville, Florida

Prepared by:

ENVIRONMENTAL SCIENCE AND ENGINEERING, INC.
Gainesville, Florida

ESE No. 80-107-100

April 1981

ATTACHMENT 9

Table 1. Emission Inventory: Maxwell House Coffee, Jacksonville, Florida (Continued, Page 2 of 2)

Flow Diagram Location	Source	Stack Dimension (ft)	Flow Rate (SCFMD)	Stack Temp. (°F)	Moisture (%)	Emission Rate (lb/hr)	No. Units
	Regular Coffee Roasting Process, Permit No. AO 16 2408 (Continued)						
X	Cold Chaff Thermalo Cyclone	1.17 ID	850	75.8	1.7	0.154	1
XI	Thermalo Cooling Car Cyclone	2.0 ID	5,334	84.7	1.3	0.270	2
XII	Thermalo Stoner Cyclone	2.0 ID	5,780	80.1	1.3	0.190	2
XIII	Thermalo Regular Coffee Scale Cyclone	1.67 ID	1,000*	86.9	2.6	0.090	1
XIV	Regular Coffee Scale and Airveyor Cyclone	1.67 ID	1,000*	57.5	1.8	0.097	15
	Green Bean Bulk Handling Process, Permit No. AO 16 2407 (Figure 3)						
I	Fuller Baghouse (4th level)	1.0x1.0	3,674	80.6	1.0	0.017	1
II	Fuller Baghouse (roof)	0.63 ID	964	200.1	1.2	0.057	3
III	Gooseneck Bunker Vent	0.50 ID	319	65.6	1.4	0.164	18
	Soluble Spray Dryer No. 2, Permit No. AO 16 2366 (Figure 4)						
I	Spray Dryer No. 2	3.50 ID	21,652	259.7	8.4	1.931	1
	Soluble Spray Dryer No. 1, Permit No. AO 16 2445 (Figure 5)						
I	Spray Dryer No. 1	3.50 ID	25,574	241.3	8.4	1.357	1
	Agglomerating Process, Permit No. AO 16 2404 (Figure 6)						
I	Spray Dryer	3.33 ID	20,633	217.8	9.3	0.893	1

Source: Environmental Science and Engineering, Inc., 1980.

* Due to poor sampling locations, measured flow rates are considered to be in error. Design flow rates furnished by Maxwell House have been substituted based on transport velocity and duct areas.

† Emission parameters are the same as soluble coffee roasting thermalo roaster afterburner.

ATTACHMENT 10

PROPOSED TEST METHODS

We are proposing Test Method No. 5 for Source No. 4.

We are proposing Visible Emissions Tests for all the other sources. All of these tests will be performed on an annual basis for the other sources except for No. 6. No test should be required on Source No. 6 because it is such a small source. Source No. 5 is made up of 4 intermittent cyclones. One cyclone per year will be tested for visible emissions.

APPENDIX A

CONFIDENTIALITY

The food industry, which includes our General Foods operation, is highly competitive and relies on marketing and promotional activities to secure proper share of the market. Heretofore, we have never communicated the kind of raw material or production data involved except through confidential accumulations such as certified public accountants, or the U.S. Department of Commerce Census of Manufacturers. Inasmuch as various segments of the industry are composed of single plant as well as multi-plant companies, information has only been furnished by companies and not by the plant. We understand our competitors also regard this type of information as confidential and only furnish such information under similar constraints.

We continue to take the position that the confidentiality of these kinds of statistics on raw materials and production are valuable to, and necessary for, the conduct of our on-going business, and that any disclosure of such confidential information will seriously prejudice the competitive position of our company.

The following data is therefore furnished on a confidential basis:

Attachments 1A, 1B, 5

Robert T. Marek, Plant Manager

1820-Q

DEPARTMENT OF HEALTH, WELFARE
& BIO-ENVIRONMENTAL SERVICES
Bio-Environmental Services Division
Air and Water Pollution Control

August 29, 1984

Mr. Ed Svec
Central Air Permitting Section
Dept. of Environmental Regulation
2600 Blairstone Road
Tallahassee, Florida 32301

Re: Maxwell House Green Steam and Drying

Dear Mr. Svec:

Bio-Environmental Services Division has reviewed the construction permit application for the captioned source. In accordance with our conversation on August 28, 1984, detailed comments from this Agency shall be withheld since Maxwell House will resubmit a more complete application in the near future. Upon review of the forthcoming application, comments shall be forwarded to your Office.

Please direct all questions and comments to the undersigned.

Very truly yours,

Jerry E. Woosley
Assistant Engineer

JEW/vj

cc: Mr. Doug Dutton - DER

scope of this manual. The following discussion will be limited to food processes in which air pollution problems are inherent and in which typical food-processing air contaminants are encountered. This section is not concerned with the production of pet foods or livestock feeds, though in some instances, these materials are byproducts of food processes.

COFFEE PROCESSING

Most coffee is grown in Central and South America. After harvesting and drying at or near the coffee plantation, most "green" coffee beans are exported and further processed before sale to the consumer. Coffee processing in the United States consists essentially of cleaning, roasting, grinding, and packaging.

Roasting is the key operation and produces most of the air contaminants associated with the industry. Roasting reduces the sugar and moisture contents of green coffee and also renders the bulk density of the beans about 50 percent lighter. An apparently desired result is the production of water-soluble degradation products that impart most of the flavor to the brewed coffee. Roasting also causes the beans to expand and split into halves, releasing small quantities of chaff.

Batch Roasting

The oldest and simplest coffee roasters are direct-fired (usually by natural gas), rotary, cylindrical chambers. These units are designed to handle from 200 to 500 pounds of green beans per 15- to 20-minute cycle and are normally operated at about 400°F. A calculated quantity of water is added at the completion of the roast to quench the beans before discharge from the roaster. After they are dumped, the beans are further cooled with air and run through a "stoner" air classifier to remove metal and other heavy objects before the grinding and packaging. The roaster and cooler and all air-cleaning devices are normally equipped with cyclone separators to remove dust and chaff from exhaust gases. Most present-day coffee roasters are of batch design, though the newer and larger installations tend to favor continuous roasters.

In the batch roaster shown in Figure 605, some of the gases are recirculated. A portion of the gases is bled off at a point between the burner and the roaster. Thus, the burner incinerates combustible contaminants and becomes both an air pollution control device and a heat source for the roaster.

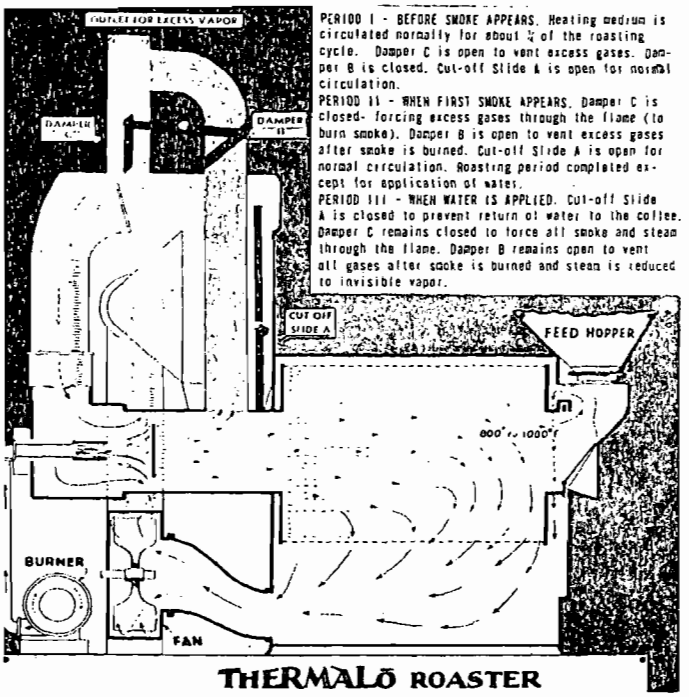


Figure 605. A recirculating-batch coffee roaster (Jabez Burns - Gump Division, Blaw-Knox Company, New York, N.Y.).

An Integrated Coffee Plant

A process flow diagram of a typical large integrated coffee plant is shown in Figure 606. Green beans are first run through mechanical cleaning equipment to remove any remaining hulls and foreign matter before the roasting. This system includes a dump tank, scalper, weigh hopper, mixer, and several bins, elevators, and conveyors. Cleaning systems such as this commonly include one or more centrifugal separators from which process air is exhausted.

The direct, gas-fired roasters depicted in Figures 606 and 607 are of continuous rather than batch design. Temperatures of 400°F to 500°F are maintained in the roaster, and the residence time is adjusted by controlling the drum speed. Roaster exhaust products are drawn off through a cyclone separator and afterburner, with some recirculation from the cyclone to the roaster. Chaff and other particulates from the cyclone are fed to a chaff collection system. Hot beans are continuously conveyed through the air cooler and stoner sections. Both the cooler and the stoner are equipped with cyclones to collect particulates.

The equipment following the stoner is used only to blend, grind, and package roasted coffee. Normally, there are no points in these systems where process air is emitted to the atmosphere.

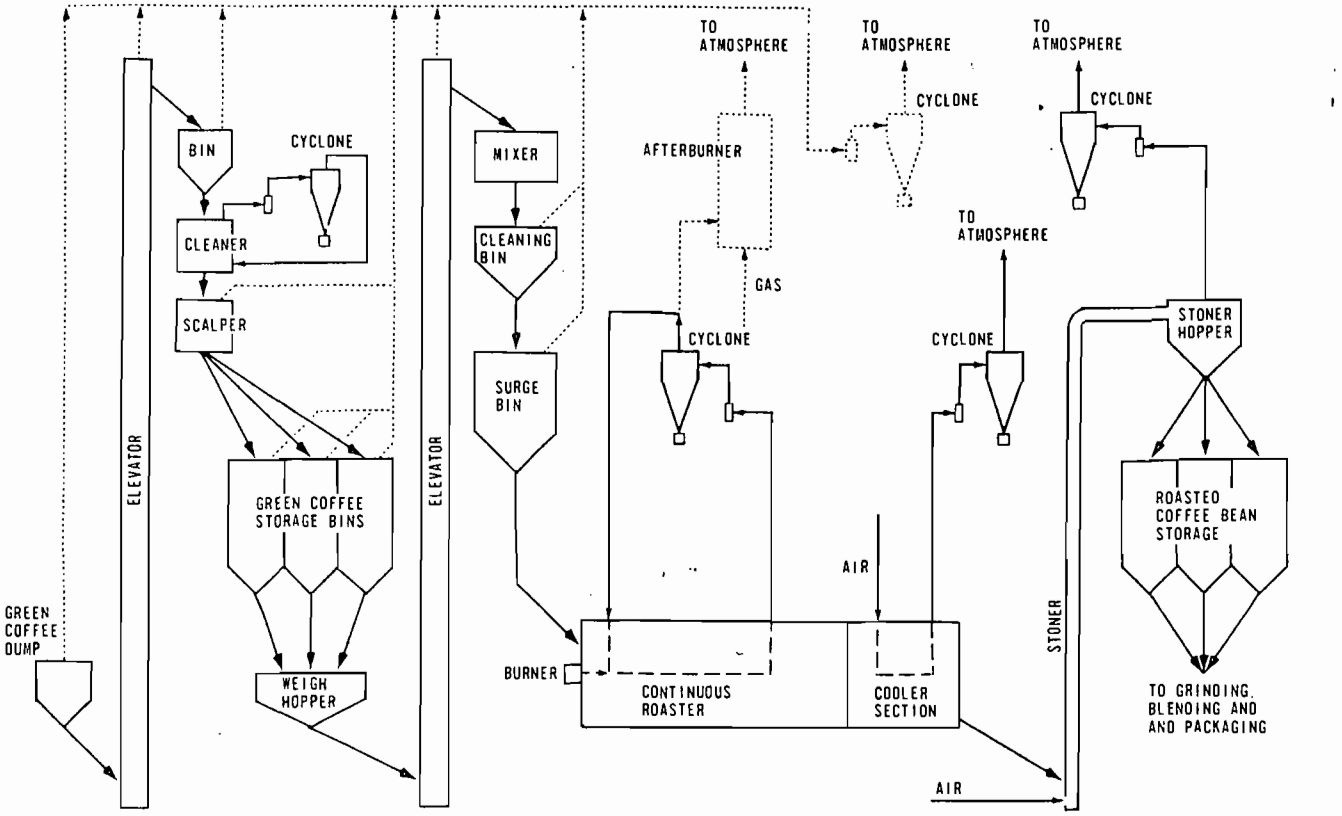


Figure 606. Typical flow sheet for a coffee-roasting plant.

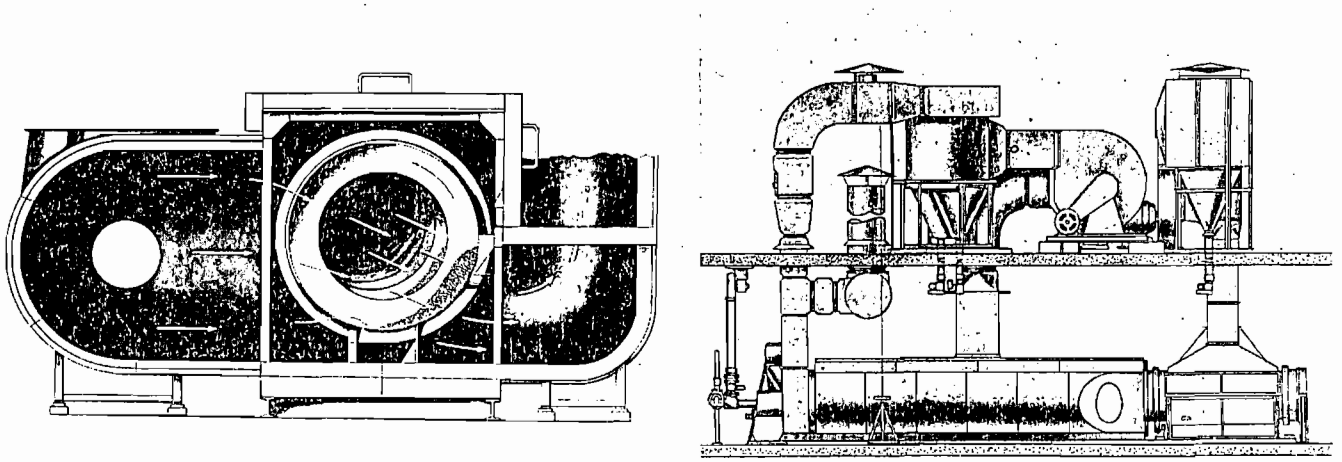


Figure 607. A continuous coffee roaster and cooler: (left) continuous roaster, showing course of the heated gases as they are drawn through the coffee beans in the perforated, helical-flanged cylinder and then into the recirculation system; (right) left-side elevation of continuous roaster, showing relationship of recirculating and cooler fans and the respective collectors on the roof (Jabez Burns - Gump Division, Blaw-Knox Company, New York, N.Y.).

At the plant shown on the flow diagram, chaff is collected from several points and run to a holding bin from which it is fed at a uniform rate to an incinerator. Conveyors in the chaff system may be of almost any type, though pneumatic conveyors are most common. The design of the incinerator depicted is similar to that of the sawdust burners described in Chapter 8 but the incinerator is much smaller.

The Air Pollution Problem

Dust, chaff, coffee bean oils (as mists), smoke, and odors are the principal air contaminants emitted from coffee processing. In addition, combustion contaminants are discharged if chaff is incinerated. Dust is exhausted from several points in the process, while smoke and odors are confined to the roaster, chaff incinerator, and, in some cases, to the cooler.

Coffee chaff is the main source of particulates, but green beans, as received, also contain appreciable quantities of sand and miscellaneous dirt. The major portion of this dirt is removed by air washing in the green coffee-cleaning system. Some chaff (about 1 percent of the green weight) is released from the bean on roasting and is removed with roaster exhaust gases. A small amount of chaff carries through to the cooler and stoner. After the roasting, coffee chaff is light and flaky, particle sizes usually exceeding 100 microns. As shown in Table 214, particulate-matter emissions from coffee processing are well below the limits permitted by typical dust and fume prohibitions.

Table 214. ANALYSIS OF COFFEE ROASTER EXHAUST GASES

	Contaminant concentration		
	Continuous roaster		Batch roaster
	Roaster	Cooler	
Particulate matter, gr/scf	0.189	0.006	0.160
Aldehydes (as formaldehyde), ppm	139	--	42
Organic acids (as acetic acid), ppm	223	--	175
Oxides of nitrogen (as NO_2), ppm	26.8	--	21.4

Coffee roaster odors are attributed to alcohols, aldehydes, organic acids, and nitrogen and sulfur compounds, which are all probably breakdown products of sugars and oils. Roasted coffee odors are considered pleasant by many people, and indeed, they may often be pleasant under certain conditions. Nevertheless, continual exposure to uncontrolled roaster exhaust gases usually elicits widespread complaints from adjacent residents. The pleasant aroma of a short sniff apparently develops into an annoyance upon long exposure.

Visible bluish-white smoke emissions from coffee roasters are caused by distilled oils and organic breakdown products. The moisture content of green coffee is only 6 to 14 percent, and thus there is not sufficient water vapor in the 400° to 500°F exhaust gases to form a visible steam plume. From uncontrolled, continuous roasters, the opacity of exhaust gases exceeds 40 percent almost continuously. From batch roasters, exhaust opacities normally exceed 40 percent only during the last 10 to 15 minutes of a 20-minute roast. Smoke opacity appears to be a function of the oil content, the more oily coffee producing the heavier smoke. The water quenching of batch-roasted coffee causes visible steam emissions that seldom persist longer than 30 seconds per batch.

Hooding and Ventilation Requirements

Exhaust volumes from coffee-processing systems do not vary greatly from one plant to another insofar as roasting, cooling, and stoning are concerned. Roasters equipped with gas recirculation systems exhaust about 24 scf per pound of finished coffee. Volumes from nonrecirculation roasters average about 40 scf per pound. A 10,000-pound-per-hour, continuous roaster with a recirculation system exhausts about 4,000 scfm. A 500-pound-per-batch, nonrecirculation roaster exhausts about 1,000 scfm. Each batch cycle lasts about 20 minutes.

Coolers of the continuous type exhaust about 120 scf per pound of coffee. Batch-type coolers are operated at ratios of about 10 scfm per pound. The time required for batch cooling varies somewhat with the operator. Batch-cooling requirements are inversely related to the degree of water quenching employed.

Continuous-type stoners use about 40 scf air per pound of coffee. Batch-stoning processes require from 4 to 10 scfm per pound, depending upon ductwork size and batch time.

Air Pollution Control Equipment

Air contaminants from coffee-processing plants have been successfully controlled with afterburners and cyclone separators, and combinations thereof. Incineration is necessary only with roaster exhaust gases. There is little smoke in other coffee plant exit gas streams where only dust collectors are required to comply with air pollution control regulations.

Separate afterburners are preferable to the combination heater-incinerator of the batch roaster shown in Figure 605. When the afterburner serves as the roaster's heat source, its maximum operat-

ing temperature is limited to about 1,000°F. A temperature of 1,200°F or greater is necessary to provide good particulate incineration and odor removal.

A roaster afterburner should always be preceded by an efficient cyclone separator in which most of the particulates are removed. A residence time of 0.3 second is sufficient to incinerate most vapors and small-diameter particles at 1,200°F. Higher temperatures and longer residences are, however, required to burn large-diameter, solid particles. Afterburner design is discussed in Chapter 5.

Properly designed centrifugal separators are required on essentially all process airstreams up to and including the stoner and chaff collection system. With the plant shown, cyclones are required at the roaster, cooler, stoner, chaff storage bin, and chaff incinerator. In addition, the scalper is a centrifugal classifier venting process air. Some plants also vent the green coffee dump tank and several conveyors and elevators to centrifugal dust collectors.

For best results, the chaff incinerator should be of the design discussed in Chapter 8 in which combustible material is fed at a uniform rate. It is, however, considerably smaller and has burning rates usually below 100 pounds per hour.

The inorganic ash content of the chaff, at approximately 5 percent by weight, is considerably greater than that of most combustible refuse fed to incinerators. Provisions should be made in the incinerator design so that this material does not become entrained in the exhaust gases. If most of the noncombustible material is discharged with products of combustion from the incinerator, the combustion contaminants then exceed 0.3 grain per cubic foot calculated to 12 percent carbon dioxide.

SMOKEHOUSES

Smoking has been used for centuries to preserve meat and fish products. Modern smoking operations do not differ greatly from those used by our forefathers, though the prime purposes of smoking today appear to be the imparting of flavor, color, and "customer appeal" to the food product. Curing and storage processes have been improved to the point where preservation is no longer the principal objective.

The vast majority of smoked products are meats of porcine and bovine origin. Some fish and poultry and, in rare instances, vegetable products are also smoked as gourmet items.

The Smoking Process

Smoking is a diffusion process in which food products are exposed to an atmosphere of hardwood smoke. Table 215 is an analysis of smoke produced through the destructive distillation of a hardwood. As smoke is circulated over the food, aldehydes, organic acids, and other organics are adsorbed onto its outer surface. Smoking usually darkens the food's natural color, and in some cases, glazes the outer surface.

Table 215. ANALYSIS OF WOOD SMOKE USED IN MEAT SMOKEHOUSES
(Jensen, 1945)

Contaminant	Concentration, ppm
Formaldehyde	20 to 40
Higher aldehydes	140 to 180
Formic acid	90 to 125
Acetic and higher acids	460 to 500
Phenols	20 to 30
Ketones	190 to 200
Resins	1,000

Regardless of smokehouse design, some spent gases are always exhausted to the atmosphere. These contain odorous, eye-irritating gases and finely divided, organic particulates, often in sufficient concentration to exceed local opacity restrictions.

Smokehouses are also used to cook and dry food products either before or after smoking. Air contaminants emitted during cooking and drying are normally well below allowable control limits.

Atmospheric Smokehouses

The oldest smokehouses are of atmospheric or natural-draft design. These boxlike structures are usually heated directly with natural gas or wood. Smoke is often generated by heating sawdust on a steel plate. These smoke generators are normally heated with natural gas pipe burners located in the bottom of the house. Hot, smoky gases are allowed to rise by natural convection through racks of meat. Large atmospheric houses are often built with two or three levels of meat racks. One or more stacks are provided to exhaust spent gases at the top of the house. In some instances the vents are equipped with exhaust fans. During the smoking and drying cycles, exhaust gas temperatures range from 120° to 150°F. Slightly higher temperatures are sometimes encountered during the cooking cycle.

6.2 COFFEE ROASTING

6.2.1 Process Description [1,2]

Coffee, which is imported in the form of green beans, must be cleaned, blended, roasted, and packaged before being sold. In a typical coffee roasting operation, the green coffee beans are freed of dust and chaff by dropping the beans into a current of air. The cleaned beans are then sent to a batch or continuous roaster. During the roasting, moisture is driven off, the beans swell, and chemical changes take place that give the roasted beans their typical color and aroma. When the beans have reached a certain color, they are quenched, cooled, and stoned.

6.2.2 Emissions [1,2]

Dust, chaff, coffee bean oils (as mists), smoke, and odors are the principal air contaminants emitted from coffee processing. The major source of particulate emissions and practically the only source of aldehydes, nitrogen oxides, and organic acids is the roasting process. In a direct-fired roaster, gases are vented without recirculation through the flame. In the indirect-fired roaster, however, a portion of the roaster gases are recirculated and particulate emissions are reduced. Emissions of both smoke and odors from the roasters can be almost completely removed by a properly designed afterburner.[1,2]

Particulate emissions also occur from the stoner and cooler. In the stoner, contaminating materials heavier than the roasted beans are separated from the beans by an air stream. In the cooler, quenching the hot roasted beans with water causes emissions of large quantities of steam and some particulate matter.[3] Table 6.2-1 summarizes emissions from the various operations involved in coffee processing.

Table 6.2-1. EMISSION FACTORS FOR ROASTING PROCESSES WITHOUT CONTROLS
EMISSION FACTOR RATING: B

Type of process	Pollutant							
	Particulates[a]		NO_x[b]		Aldehydes[b]		Organic acids[b]	
	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT	lb/ton	kg/MT
Roaster								
Direct-fired	7.6	3.8	0.1	0.05	0.2	0.1	0.9	0.45
Indirect-fired	4.2	2.1	0.1	0.05	0.2	0.1	0.9	0.45
Stoner and cooler[c]	1.4	0.7	–	–	–	–	–	–
Instant coffee spray dryer	1.4[d]	0.7[d]	–	–	–	–	–	–

[a]Reference 3.
[b]Reference 1.
[c]If cyclone is used, emissions can be reduced by 70 percent.
[d]Cyclone plus wet scrubber always used, representing a controlled factor.

References for Section 6.2

1. Polglase, W.L., H.F. Dey, and R.T. Walsh. Coffee Processing. In: Air Pollution Engineering Manual. Danielson, J.A. (ed.). U.S. DHEW, PHS, National Center for Air Pollution Control. Cincinnati, Ohio. Publication Number 999-AP-40. 1967. p. 746-749.

2. Duprey, R.L. Compilation of Air Pollutant Emission Factors. U.S. DHEW, PHS, National Center for Air Pollution Control. Durham, N.C. PHS Publication Number 999-AP-42. 1968. p. 19-20.

3. Partee, F. Air Pollution in the Coffee Roasting Industry. Revised Ed. U.S. DHEW, PHS, Division of Air Pollution. Cincinnati, Ohio. Publication Number 999-AP-9. 1966.