STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

Mr. Murray R. White
Chief Operating Officer
Arnold Cellophane Corporation
20400 S.W. 112th Avenue
Miami, Florida 33157

April 14, 1987

Enclosed is Permit Number AC 13-128731 to Arnold Cellophane Corporation which authorizes the construction of flexographic printing press P-5 at your existing facility in Miami, Dade County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

Any Party to this permit has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

C. DiFillippo, P.E.
P. Wong
I. Goldman

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on April 15, 1987 to the listed persons.

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

R Bruce Hutchison 4/15/87
Clerk Date

Final Determination

Arnold Cellophane Corporation
Dade County
Miami, Florida

Permit Number:

AC 13-128731

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

April 9, 1987

Final Determination

The construction application and attachments have been reviewed by the department. Public notice of the department's intent to issue was published in The Miami News issue of February 25, 1987. The technical evaluation and preliminary determination were available for public inspection at the DER's Southeast Florida District office, the Dade County's Environmental Resources Management office, and the DER's Bureau of Air Quality Management office.

Since the noticed expiration date of June 30, 1987, will not allow enough time to apply for and acquire an operating permit, the expiration date will be amended to August 31, 1987 (see the BAQM interoffice memorandum dated April 8, 1987).

The only comment received was the BAQM memo concerning the expiration date; therefore, it is recommended that the construction permit be issued as amended.

2-27-87
Miami

ARNOLD PACKAGING

A HARGRO COMPANY

February 27, 1987

C.F. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
State of Florida
Dept. of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL. 32399-2400

Dear Mr. Fancy:

Enclosed please find signed affadavit attesting to the publication in the Miami News on February 25th the State of Florida's Notice of Intent.

Sincerely,

Murray R. White
Chief Operating Officer

MRW:mrs
Encl.

cc: Mr. Bill Thomas,
Bureau of Air Quality Management

DER
MAR 2 1987
BAQM

P.O. BOX 570370, 20400 S. W. 112 AVENUE MIAMI, FL 33157 305 238 5961

THE MIAMI NEWS
A COX NEWSPAPER

PUBLISHED DAILY
MIAMI — DADE — FLORIDA

STATE OF FLORIDA
COUNTY OF DADE:

Before the undersigned authority personally appeared

Ann Martula

who on oath says that he/she is

Front Office Manager

of The Miami News, a daily newspaper published at Miami in Dade County, Florida; that the attached copy of advertisement was published in said newspaper in the issues of ...

February 14, 25, 1987

Affiant further says that the said The Miami News is a newspaper published at Miami, in the said Dade County, Florida, and that the said newspaper has heretofore been continuously published in said Dade County, Florida, each day and has been entered as second class mail matter at the post office in Miami, in said Dade 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 the said newspaper.

Ann Martula

Sworn to and subscribed before me this 25 day of Feb A.D. 19 87

My commission expires

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. SEP 25,1988
BONDED THRU GENERAL INS. UND

STATE OF FLORIDA
Department of Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to Arnold Cellophane Corporation to install a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5. The project will be located at the applicant's existing facility at 20400 S.W. 112th Avenue in Miami, Dade County, 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 determination (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 Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has 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 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 Rule 28-5.207, Florida Administrative Code, 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 32399-2400. 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:

Dept. of Environmental Regulation, Bureau of Air Quality Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation, Southeast Florida District, 3301 Gun Club Road, West Palm Beach, Florida 33402

Dade County Department of Environmental Resources Management, 801 S.W. 3rd Avneue, Miami, Florida 33131

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

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
Arnold Cellophane Corporation
20400 Southwest 112th Ave.
Miami, Florida 33157

Permit Number: AC 13-128731
Expiration Date: August 31, 1987
County: Dade
Latitude/Longitude: 25° 34' 30" N
80° 22' 15" W
Project: Installation of a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5

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

For the construction/installation of a catalytic incinerator with an associated capture and transport system to be retrofitted to the new flexographic printing press designated P-5 (originally P-6; see construction permits: AC 13-55914, issued 11/2/82; AC 13-79884, issued 1/18/85; and, AC 13-116139, issued 6/17/86). The overall capture and transport efficiency and the destruction efficiency of the add-on control system was established in a LAER determination, pursuant to FAC Rule 17-2.510(4).

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted in the "Specific Conditions".

The Standard Industrial Codes are: Major Group-27: Printing, Publishing, and Allied Industries; Group Number-275: Commercial Printing; and, Industry Number-2751: Commercial Printing, Letterpress and Screen. The Source Classification Codes are: 4-05-003-01: Flexographic Printing.

Attachments are as follows:

1. Application to Construct Air Pollution Sources: DER Form 17-1.202 and Murry R. White's cover letter dated 12/4/86 and received 12/22/86.
2. Application to Construct Air Pollution Sources: DER Form 17-1.202 and Murry R. White's cover letter dated 12/21/86 and received 12/24/86.
3. BAQM interoffice memorandum dated April 8, 1987.

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.

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.

GENERAL CONDITIONS:

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.

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.

GENERAL CONDITIONS:

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.
(x) Determination of Lowest Achievable Emission Rate (LAER).

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

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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 source, designated P-5, is subject to the emission standards established through a determination of LAER, which requires "70% overall capture and transport efficiency of the VOC delivered to the substrate" and "95% total destruction of the VOC delivered to the inlet of a catalytic incinerator." The add-on catalytic incinerator is a ComCat manufactured by Pillar Corporation.

2. Compliance tests shall be required to verify the LAER determined efficiencies:

o Catalytic incinerator destruction efficiency:
-The inlet and outlet VOC concentrations shall be determined by using EPA Method 25. Dividing the outlet concentration by the inlet concentration will provide the penetration. Therefore, 1 - Penetration = destruction efficiency.

o Capture and transport efficiency:
-The volatile organic matter content and the density of the inks shall be determined using EPA Method 24A or is to be provided by the vendor(s);
-A testing cycle shall be 24-hours in duration and is to be representative of a typical flexographic printing press operation;
-The capture and transport efficiency is to be assessed using the following formula, which is based on measurements and/or calculations:

$$\text{capture and transport efficiency} = \frac{\text{mass of VOC delivered to the incinerator inlet/time}}{\text{mass of VOC delivered to the substrate/time}}$$

SPECIFIC CONDITIONS:

-All fugitive VOC emissions are to be accounted for: clean-up solvents, make-up solvents (solvents used to maintain ink viscosity), and solvent spillage make up the majority of the fugitive VOC emissions; and,
-Final test results for review and comment shall be filed with the Department (Southeast Florida District and BAQM), DERM (Dade County Environmental Resources Management), and Region IV USEPA, as soon as practical, but no later than 45 days after the last sampling run of each test is completed.

3. The source is subject to FAC Rule 17-2.620(1)(C), and some in-house preventive maintenance procedures will be required, but not limited to:

° maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
° where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
° all fittings, valves, lines, etc., shall be properly maintained;
° all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
° maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

4. Objectionable odors shall not be allowed off plant property, pursuant to FAC Rule 17-2.620(2).

5. The source is subject to FAC Rule 17-2.240, which states that no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. Therefore, an electrical interlock shall be installed such that P-5 is prevented from operating without its associated vapor control system.

6. The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the DER's Southeast Florida District and DERM and file all written reports with the same offices.

SPECIFIC CONDITIONS:

7. Whenever this source is being operated with other graphic arts system units (designated P-1, P-2, P-3, and P-4), the catalytic incinerator shall be required to meet the emission standard established through the determination of LAER, which is "95% total destruction of the VOC delivered to the inlet of the catalytic incinerator". A compliance test to verify the destruction efficiency shall be required by the expiration date of this permit and prior to obtaining an operating permit.

8. Proposed operation is 24 hours per day, 7 days per week, and 52 weeks per year, or 8760 hours annually.

9. The department (Bureau of Air Quality Mangement and Southeast Florida District) shall be given 20 days prior notice of the scheduled test date in order to arrange for a pre-test meeting. Dade County Environmental Resources Management and Region IV United States Environmental Protection Agency shall also be notified at the same time.

10. The test data shall include the temperature at the inlet, at the bed, and at the outlet of the incinerator for the tested conditions, which will be determined at the pre-test conference.

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the DER's Southeast Florida District and DERM 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: AC 13-128731
Expiration Date: August 31, 1987

SPECIFIC CONDITIONS:

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this 13 day of April, 1987

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Dale Twachtmann

Dale Twachtmann, Secretary

____ pages attached

ATTACHMENT 3

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: Permit File: AC 13-128731

FROM: Bruce Mitchell

DATE: April 8, 1987

SUBJ: Proposed Expiration Date

The proposed expiration date will not allow enough time to apply for and acquire an operating permit. Therefore, it is recommended that the proposed draft construction permit, referenced above, be amended to August 31, 1987.

PM
2-27-87
Miami

ARNOLD PACKAGING

A HARGRO COMPANY

February 27, 1987

C.E. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management
State of Florida
Dept. of Environmental Regulation
2600 Blairstone Road
Tallahassee, FL. 32399-2400

Dear Mr. Fancy:

Enclosed please find signed affadavit attesting to the publication in the Miami News on February 25th the State of Florida's Notice of Intent.

Sincerely,

Murray R. White
Chief Operating Officer

MRW:mrs
Encl.

cc: Mr. Bill Thomas
Bureau of Air Quality Management

DER
MAR 2 1987
BAQM

P.O. BOX 570370, 20400 S. W. 112 AVENUE / MIAMI, FL 33157 / 305 238-5961

THE MIAMI NEWS
A COX NEWSPAPER

PUBLISHED DAILY
MIAMI — DADE — FLORIDA

STATE OF FLORIDA
COUNTY OF DADE:

Before the undersigned authority personally appeared

Ann Martula

who on oath says that he/she is

Front Office Manager

of The Miami News, a daily newspaper published at Miami in Dade County, Florida; that the attached copy of advertisement was published in said newspaper in the issues of ...

February 14, 25, 1987

Affiant further says that the said The Miami News is a newspaper published at Miami, in the said Dade County, Florida, and that the said newspaper has heretofore been continuously published in said Dade County, Florida, each day and has been entered as second class mail matter at the post office in Miami, in said Dade 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 the said newspaper.

Ann Martula

Sworn to and subscribed before me this 25

day of Feb A.D. 19 87

My commission expires

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. SEP 25,1988
BONDED THRU GENERAL INS. UND.

STATE OF FLORIDA
Department of Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to Arnold Cellophane Corporation to install a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5. The project will be located at the applicant's existing facility at 20400 S.W. 112th Avenue in Miami, Dade County, 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 determination (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 Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has 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 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 Rule 28-5.207, Florida Administrative Code, 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 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Seciton 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:

Dept. of Environmental Regulation, Bureau of Air Quality Management, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation, Southeast Florida District, 3301 Gun Club Road, West Palm Beach, Florida 33402

Dade County Department of Environmental Resources Management, 801 S.W. 3rd Avneue, Miami, Florida 33131

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.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

January 30, 1987

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Murray R. White
Chief Operating Officer
Arnold Cellophane Corporation
20400 S.W. 112 Avenue
Miami, Florida 33157

Dear Mr. White:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit for flexographic printing press P-5 at your existing facility in Miami, Dade County, Florida.

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/pa

Attachments

cc: Clement DiFillippo, P.E.
Patrick Wong
Isidore Goldman

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to Arnold Cellophane Corporation to install a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5. The project will be located at the applicant's existing facility at 20400 S.W. 112th Avenue in Miami, Dade County, Florida. A determination of best available control technology (BACT) was not required.

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Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation
Southeast Florida District
3301 Gun Club Road
West Palm Beach, Florida 33402

Dade County Department of Environmental
Resources Management
801 S.W. 3rd Avenue
Miami, Florida 33131

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.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Arnold Cellophane Corporation
20400 S.W. 112 Avenue
Miami, Florida 33157

DER File No. AC 13-128731

INTENT TO ISSUE

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

The applicant, Arnold Cellophane Corporation, applied on December 22, 1986, to the Department of Environmental Regulation for a permit to install a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5. The proposed construction will be located at the applicant's existing facility in Miami, Dade County, Florida.

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

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit application. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30) days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of

the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copies enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed 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:

Murray R. White
Clement DiFillippo, P.E.
Isidore Goldman
Patrick Wong

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on February 2, 1987.

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

Patricia H Adams
Clerk

Feb. 2, 1987
Date

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.

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 an administrative determination (hearing) under Section 120.57, F.S.

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(4) Notice to substantially affected persons concerning applications for Department permits is an essential and integral part of the state environmental licensing process. Therefore, no application for a permit for which publication of notice is required shall be granted until and unless proof of publication of Notice is furnished to the appropriate Department permitting office.

(5)(a) Any applicant or person benefiting from the Department's action may elect to publish notice of proposed agency action in the manner provided by subsection (2) or (3). Any person who elects to publish notice of proposed agency action, upon presentation of proof of publication to the Department, prior to final agency action, shall be entitled to the same benefits under this rule as a person who is required to publish notice of proposed agency action. Since persons whose substantial interests are affected by a Department decision on a permit application may petition for an administrative proceeding within fourteen (14) days after receipt of notice and since, unless notice is given or published as prescribed in this rule, receipt of notice can occur at any time, the applicant or persons benefiting from the Department's action cannot justifiably rely on the finality of the Department's decision without the notice having been duly given or published.

(b) The notices required by this rule may be combined with other notices required by the Department pursuant to Chapter 403, 376, or 253, F.S., or Chapter 17, FAC.

(c) The provisions of this section shall also apply to the permitting of hazardous waste facilities, but only to the extent it is consistent with Chapter 17-30, Part IV, FAC. Whenever Chapter 17-30, Part IV, FAC, provides for a different time or notice procedure than that set forth in this section the time and notice provisions of Chapter 17-30 shall govern.

(6) Failure to publish any notice of application, notice of proposed agency action, or notice of agency action required by the Department shall be an independent basis for the denial of a permit.

Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S. History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.155 Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding.

(1)(a) Any person whose substantial interests may be affected by proposed or final agency action may file a petition for administrative proceeding. A petition shall be in the form required by this Chapter and Chapter 28-5, FAC, and shall be filed (received) in the Office of General Counsel of the Department within fourteen (14) days of receipt of notice of proposed agency action or within fourteen (14) days of receipt of notice of

agency action whenever there is no public notice of proposed agency action. In addition to the requirements of Rule 28-5.201, FAC, the Petition must specify the county in which the project is or will be located.

(b) Failure to file a petition within fourteen (14) days of receipt of notice of agency action or fourteen (14) days of receipt of notice of proposed agency action, whichever notice first occurs, shall constitute a waiver of any right to request an administrative proceeding under Chapter 120, F.S.

(c) When there has been no publication of notice of agency action or notice of proposed agency action as prescribed in Rule 17-103.150, FAC, a person who has actual knowledge of the agency action or has knowledge which would lead a reasonable person to conclude that the Department has taken final agency action, has a duty to make further inquiry within fourteen (14) days of obtaining such knowledge by contacting the Department to ascertain whether action has occurred. The Department shall upon receipt of such an inquiry, if agency action has occurred, promptly provide the person with notice as prescribed by Rule 17-103.150, FAC. Failure of the person to make inquiry with the Department within fourteen (14) days after obtaining such knowledge may estop the person from obtaining an administrative proceeding on the agency action.

(2)(a) "Receipt of notice of agency action" means receipt of written notice of final agency action, as prescribed by Department rule, or the publication, pursuant to Department rule, of notice of final agency action, whichever first occurs.

(b) "Receipt of notice of proposed agency action" means receipt of written notice (such as a letter of intent) that the Department proposes to take certain action, or the publication pursuant to Department rule of notice of proposed agency action, whichever first occurs.

(3) Notwithstanding any other provision in this Chapter, should a substantially affected person who fails to timely request a hearing under Section 120.57, F.S., administratively appeal the final Department action or order, the record on appeal should be limited to:

(a) the application, and accompanying documentation submitted by the applicant prior to the issuance of the agency's intent to issue or deny the requested permit.

(b) the materials and information relied upon by the agency in determining the final agency action or order;

(c) any notices issued or published; and

(d) the final agency action or order entered concerning the permit application.

(4) In such cases where persons do not timely exercise their rights accorded by Section 120.57(1), Florida Statutes, the allegations of fact contained in or incorporated by the final agency action shall be deemed uncontested and true, and appellants may not dispute the truth of such allegations upon subsequent appeal.

(5) Any applicant may challenge the Department's request for additional information by filing with the Office of General Counsel an appropriate petition for administrative proceeding pursuant to Section 120.60, F.S., following receipt by

the applicant of the Department's notification, pursuant to Section 403.0876, F.S., that additional information is required.
Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S. History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.160 Uniformity in Approval and Denial of Applications for Department Permits and Certifications. To the extent possible and consistent with the public interest, the Department approves and denies applications for permits and certifications on a uniform and consistent basis. Final Department actions on applications for permits and certifications shall be consistent with prior Department actions, unless deviation therefrom is explained by the Department in writing or the hearing officer who submits a recommended order to the Department for final agency action in accordance with Section 120.57, Florida Statutes.
Specific Authority: 120.53(1), F.S. Law Implemented: 120.53(1), 120.68(12), F.S. History: New 2-6-78, Transferred from 17-1.63, 6-1-84.

17-103.170 Designation, Preparation and Transmittal of Record for Administrative Appeals.

When any Department action or order is the subject of an administrative appeal under Chapter 17-103, Part II, FAC, the following requirements shall apply:

(1) Designation of Record. Within fifteen (15) days of rendition of the Department's final order, the appellant shall designate to the Department, in writing, with copies to other parties, those documents or things under the control of or in the possession of the Department which the appellant desires to have included in the record, and which were received or considered in the Department proceeding below. If a proceeding was reported by mechanical recording devices, the appellant shall designate those portions of the proceeding for which it requires written transcription or tapes for transcription. Any other party may designate other portions of the record in the manner provided herein. Such cross-designation shall be filed with the Department, with copies provided other parties, within seven (7) days after receipt of the designation by the appellant.

(2) Original Record. The Department shall thereupon include in the record all of the designated portions of the original papers and exhibits in the proceedings or matter from which administrative appeal is taken, together with a copy of any such parts of the proceedings as were stenographically reported or transcribed from tapes, and as have been designated by the parties and certified by a notary public, the reporter, or other officer for inclusion in the record on appeal or review, and certified copies of the order, if any, of which review is sought. The Department may, at its discretion, substitute certified copies for original papers or documents in its possession.

(3) Preparation of Record. Upon tender or deposit by appellant of the estimated cost of preparation, the Department shall prepare the record in accordance with the designations of the parties. The cost of preparation, and reproduction,

Technical Evaluation
and
Preliminary Determination

Arnold Cellophane Corporation
Dade County
Miami, Florida

Permit Number:
AC 13-128731

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

January 30, 1987

I. Project Description

A. Applicant

Arnold Cellophane Corporation
20400 Southwest 112th Avenue
Miami, Florida 33157

B. Project and Location

A construction permit, No. AC 13-55914, was issued on November 2, 1982, for the construction/installation of a new flexographic printing press and associated natural gas fired drier/heater, designated P-5 (originally P-6), pursuant to Florida Administrative Code (FAC) Rule 17-2.650(1)(f)16., Graphic Arts Systems. Because low solvent technology (LST) was unachievable with P-5, the applicant applied for and received a construction permit (AC 13-79884; issued on January 18, 1985) to install a catalytic incinerator with an associated vapor capture and transport system, whose minimum performance efficiencies were based on a LAER determination and incorporated in the Specific Conditions. Since the permittee failed to obtain an extension of the expiration date or an operating permit, AC 13-79884 expired on September 1, 1985, and the permittee/applicant had to obtain another construction permit (AC 13-116139; issued on June 17, 1986). Since AC 13-116139 expired on October 31, 1986, prior to obtaining an extension of the expiration date or an operating permit, the permittee/applicant is having to obtain another construction permit.

The existing facility is located at the above address in Dade County, Florida, with UTM coordinates of Zone 17, 563.2 km East and 2828.6 km North.

C. Process and Controls

Flexographic printing press P-5 will use primarily polypropylene film substrates and is scheduled to operate 8760 hours per year.

The flexographic printing process uses a rubber image carrier located above the surface of the plate, is usually web fed, and runs on a variety of substrates. After the application of a solvent based ink to the surface of a moving web or film, the solvent is evaporated using heated air produced by the associated drier/heater. The solvent laden air is then exhausted into the atmosphere or through a control device with an associated vapor capture and transport system.

The applicant proposes to install a ComCat catalytic incinerator manufactured by Pillar Corporation. Necessary

enclosures and ducting will be installed to capture the pollutant vapors emitted during the drying process. A determination of LAER (Lowest Achievable Emission Rate) will be proposed to establish the overall vapor capture and transport efficiency for the VOC delivered to the substrate and the final destruction efficiency for the catalytic incinerator of the VOC delivered to the inlet of the incinerator.

Some in-house preventive maintenance procedures will be required to maintain minimum fugitive VOC (volatile organic compounds and organic solvents) emissions from the operation of P-5:

- maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
- where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
- all fittings, valves, lines, etc., shall be properly maintained;
- all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
- maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

II. Rule Applicability

The pollutants projected to be emitted from P-5 are VOC, particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), and sulfur dioxide (SO_2), in accordance with FAC Rule 17-2.100.

The following (Table 1) will display the annual potential pollutant emissions in tons per year (TPY) from the existing facility and based on 1983 data:

Table 1

Existing Facility	Potential Pollutant Emissions (TPY)				
	VOC	PM	NOx	CO	SO_2
Graphic Arts	613.3				
Paper Coating	617.1				
Driers/Heaters	0.04	0.04	0.73	0.15	trace
TOTAL:	1230.44				

Note: ° Driers/Heaters: Emissions (products of combustion) based on AP-42 Emission Factors Table 1.4-1.
° Driers/Heaters: VOC emissions are estimated for nonmethane.

The existing facility is major for the pollutant VOC in accordance with FAC Rule 17-2.100(110) and is located in an area designated nonattainment for the pollutant ozone in accordance with FAC Rule 17-2.410(1)(d). VOC's are precursors to ozone.

The following (Table 2) will display the annual projected potential pollutant emissions in TPY for P-5:

Table 2

P-5	Projected Potential Pollutant Emissions (TPY)				
	VOC	PM	NOx	CO	SO_2
Flexographic printing press	204.2				
Drier/heater	0.004	0.004	0.073	0.015	trace

Note:
- P-5 unit is estimated to increase natural gas usage by 10% of the facility's current usage.
- Drier/heater: Emissions (products of combustion) based on AP-42 Emission Factors, Table 1.4-1.
- Drier/heater: VOC emissions are estimated for nonmethane.

The VOC potential emissions projected for P-5 shall be reviewed in accordance with FAC Rule 17-2.510, New Source Review for Nonattainment Areas.

Since the projected potential VOC emissions for P-5 are greater than the significant emission rates (40 TPY VOC) displayed in Table 500-2, pursuant to FAC Rule 17-2.510(2)(e)2., the source's VOC emissions shall be reviewed in accordance with FAC Rule 17-2.510(2)(d)4.a., Modifications to Major Facilities. Therefore, P-5 shall be subject to the provisions of FAC Rule 17-2.510(4), Preconstruction Review Requirements.

Under FAC Rule 17-2.510(4)(a), P-5 is subject to a determination of LAER for the affected pollutant VOC. LAER is to be determined in accordance with FAC Rule 17-2.640. For LAER, the applicant proposed to retrofit a catalytic incinerator with a capture and transport system having an overall efficiency of 70% of the VOC delivered to the substrate and a 95% total destruction of the VOC captured and transported to the inlet of the catalytic

incinerator. The bureau proposes that LAER (see attachment) be the same as that requested by the applicant. Therefore, with the application of LAER, the following (Table 3) will exhibit the projected VOC potential emissions in TPY:

Table 3

	Projected VOC Potential Emissions (TPY)
P-5	68.4

Note: ° Based on 70% overall capture and transport efficiency of the VOC delivered to the substrate and 95% total destruction of the VOC captured and transported to the inlet of the catalytic incinerator.

In order to comply with the provisions of FAC Rule 17-2.510(4)(b), Arnold Cellophane Corporation signed a Delayed Compliance Consent Order (DCO) with the department for the existing facility. The DCO was signed on September 10, 1984. Since a DCO is subject to USEPA Region IV approval, the proposed rule (DCO) appeared in the Federal Register, Vol. 49, No. 196, dated October 9, 1984.

Pursuant to FAC Rule 17-2.510(4)(c), there is sufficient new source allowance for Dade County, as displayed in Table 510-1, to allow the construction/installation of P-5. Therefore, VOC emissions offsets shall not be required.

Satisfying the review of the affected pollutant VOC, pursuant to FAC Rule 17-2.510(2)(d)4.a., the VOC emission standards will be permitted in accordance with the proposed LAER determination, pursuant to FAC Rule 17-2.510(4)(a).

The products of combustion of the natural gas in the associated drier/heater are less than 0.10 TPY (see Table 2) and will become a part of the waste stream captured and transported to and oxidized by the catalytic incinerator.

A compliance test will be required to ascertain the actual overall collection and destruction efficiencies of the retrofitted VOC control system pursuant to the proposed LAER determination and will be accomplished by the following:

- The destruction efficiency of the catalytic incinerator of the pollutant vapors delivered to it shall be determined by establishing and comparing the inlet and outlet concentrations using EPA Method 25, which is the test method required of sources with add-on destructive control devices that are subject to FAC Rule 17-2.650(1)(f)16.b.(1)(C) and pursuant to FAC Rule 17-2.700, Stationary Point Source Emissions Test Procedures.

- Since there is no official EPA test method for measuring capture and transport efficiency, the following methodology will be utilized:

  -the determination of the volatile organic matter content and the density of the printing inks shall be in accordance with 40 CFR 60, Appendix A, Method 24A or as provided from the vendor(s).

  -a 24-hour testing cycle is to be used and is to represent a typical operating cycle.

  -capture and transport efficiency is to be assessed using the following formula, which is based on measurements and/or calculations:

$$\text{capture and transport efficiency} = \frac{\text{mass of VOC delivered to the incinerator inlet/time}}{\text{mass of VOC delivered to the substrate/time}}$$

  -all fugitive VOC emissions are to be accounted for: clean-up solvents, make-up solvents (solvents used to maintain ink viscosity), and solvent spillage.

The source is subject to the provision of FAC Rule 17-2.620(1)(a), which states that no person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the department. Therefore, some in-house preventive maintenance procedures shall be required (see Section I.C.).

The source is subject to the provisions of FAC Rule 17-2.620(2), which states that no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. Therefore, objectionable odors shall not be allowed off plant property.

The source is subject to the provisions of FAC Rule 17-2.240, which states that no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. Therefore, an electrical interlock shall be installed such that P-5 is prevented from operating without its associated vapor control system.

The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the offices of DER's Southeast Florida District and the Dade County's Environmental Resources Management and file all written reports with the same offices.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

In applying the provisions of FAC Rule 17-2.510(4), the source was subject to the determination of LAER. Efficiencies were established for the VOC vapor control system (to be retrofitted), which are "70% overall capture and transport of the VOC delivered to the substrate" and "95% total destruction of the VOC delivered to the catalytic incinerator inlet".

The emission limitations are in compliance with the applicable requirements of FAC Chapter 17-2.

B. Air Quality Analysis

An air quality analysis was not required.

IV. Conclusions

With the application of LAER requiring the installation of an add-on vapor control system, the VOC emissions reduction will be greater than with the application of the source specific RACT rule. Also, with the retrofitting of the same VOC control system to the existing facility's graphic arts system units (P-1, P-2, P-3, and P-4), the facility VOC emissions will be greatly reduced. For the VOC emissions from the existing facility's graphic arts system units, the applicant must only demonstrate 90% total destruction of the VOC delivered to the incinerator inlet when operating without P-5. However, whenever P-5 is to be operated with any of the existing graphic arts system units, the LAER established destruction efficiency shall prevail.

Since there is no approved method to assess an overall capture and transport efficiency, a post compliance test(s) review and comment period will be established with the applicant,

the Dade County's Environmental Resources Management, the DER's Southeast Florida District, the DER's Bureau of Air Quality Management, and the Region IV USEPA, to ascertain if the compliance test(s) did verify the guidelines established through the determination of LAER.

The General and Specific Conditions are listed in the attached proposed permit.

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:
Arnold Cellophane Corporation
20400 Southwest 112th Ave.
Miami, Florida 33157

Permit Number: AC 13-128731
Expiration Date: June 30, 1987
County: Dade
Latitude/Longitude: 25° 34' 30" N
80° 22' 15" W
Project: Installation of a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5

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

For the construction/installation of a catalytic incinerator with an associated capture and transport system to be retrofitted to the new flexographic printing press designated P-5 (originally P-6; see construction permits: AC 13-55914, issued 11/2/82; AC 13-79884, issued 1/18/85; and, AC 13-116139, issued 6/17/86). The overall capture and transport efficiency and the destruction efficiency of the add-on control system was established in a LAER determination, pursuant to FAC Rule 17-2.510(4).

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted in the "Specific Conditions".

The Standard Industrial Codes are: Major Group-27: Printing, Publishing, and Allied Industries; Group Number-275: Commercial Printing; and, Industry Number-2751: Commercial Printing, Letterpress and Screen. The Source Classification Codes are: 4-05-003-01: Flexographic Printing.

Attachments are as follows:

1. Application to Construct Air Pollution Sources: DER Form 17-1.202 and Murry R. White's cover letter dated 12/4/86 and received 12/22/86.
2. Application to Construct Air Pollution Sources: DER Form 17-1.202 and Murry R. White's cover letter dated 12/21/86 and received 12/24/86.

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: AC 13-128731
Expiration Date: June 30, 1987

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.

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.

GENERAL CONDITIONS:

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.

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.

GENERAL CONDITIONS:

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.
(x) Determination of Lowest Achievable Emission Rate (LAER).

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

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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 source, designated P-5, is subject to the emission standards established through a determination of LAER, which requires "70% overall capture and transport efficiency of the VOC delivered to the substrate" and "95% total destruction of the VOC delivered to the inlet of a catalytic incinerator." The add-on catalytic incinerator is a ComCat manufactured by Pillar Corporation.

2. Compliance tests shall be required to verify the LAER determined efficiencies:

o Catalytic incinerator destruction efficiency:
-The inlet and outlet VOC concentrations shall be determined by using EPA Method 25. Dividing the outlet concentration by the inlet concentration will provide the penetration. Therefore, 1 - Penetration = destruction efficiency.

o Capture and transport efficiency:
-The volatile organic matter content and the density of the inks shall be determined using EPA Method 24A or is to be provided by the vendor(s);
-A testing cycle shall be 24-hours in duration and is to be representative of a typical flexographic printing press operation;
-The capture and transport efficiency is to be assessed using the following formula, which is based on measurements and/or calculations:

$$\text{capture and transport efficiency} = \frac{\text{mass of VOC delivered to the incinerator inlet/time}}{\text{mass of VOC delivered to the substrate/time}}$$

SPECIFIC CONDITIONS:

-All fugitive VOC emissions are to be accounted for: clean-up solvents, make-up solvents (solvents used to maintain ink viscosity), and solvent spillage make up the majority of the fugitive VOC emissions; and,
-Final test results for review and comment shall be filed with the Department (Southeast Florida District and BAQM), DERM (Dade County Environmental Resources Management), and Region IV USEPA, as soon as practical, but no later than 45 days after the last sampling run of each test is completed.

3. The source is subject to FAC Rule 17-2.620(1)(C), and some in-house preventive maintenance procedures will be required, but not limited to:

° maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
° where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
° all fittings, valves, lines, etc., shall be properly maintained;
° all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
° maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

4. Objectionable odors shall not be allowed off plant property, pursuant to FAC Rule 17-2.620(2).

5. The source is subject to FAC Rule 17-2.240, which states that no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. Therefore, an electrical interlock shall be installed such that P-5 is prevented from operating without its associated vapor control system.

6. The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the DER's Southeast Florida District and DERM and file all written reports with the same offices.

SPECIFIC CONDITIONS:

7. Whenever this source is being operated with other graphic arts system units (designated P-1, P-2, P-3, and P-4), the catalytic incinerator shall be required to meet the emission standard established through the determination of LAER, which is "95% total destruction of the VOC delivered to the inlet of the catalytic incinerator". A compliance test to verify the destruction efficiency shall be required by the expiration date of this permit and prior to obtaining an operating permit.

8. Proposed operation is 24 hours per day, 7 days per week, and 52 weeks per year, or 8760 hours annually.

9. The department (Bureau of Air Quality Mangement and Southeast Florida District) shall be given 20 days prior notice of the scheduled test date in order to arrange for a pre-test meeting. Dade County Environmental Resources Management and Region IV United States Environmental Protection Agency shall also be notified at the same time.

10. The test data shall include the temperature at the inlet, at the bed, and at the outlet of the incinerator for the tested conditions, which will be determined at the pre-test conference.

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the DER's Southeast Florida District and DERM 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: AC 13-128731
Expiration Date: June 30, 1987

SPECIFIC CONDITIONS:

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this_____day of_____, 19___

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

_____
Howard L. Rhodes, P.E.
Director, Division of Environmental Programs

____ pages attached

ATTACHMENT 1

Available Upon Request

ATTACHMENT 2

12-21-86
Miami, FL

ARNOLD PACKAGING
A HARGRO COMPANY

DER
DEC 24 1986
BAQM

December 21, 1986

Mr. C.H. Fancy
Deputy Bureau Chief
FDER/BAQM
2600 Blair Stond Road
Tallahassee, Florida 32301

Dear Sir:

Enclosed is the update application of a construction permit for P-5 press at Arnold. Due to a secretarial oversight, the letter we sent on Friday December 19th, contained the check but contained an old application.

Please accept my apologies for the mix up.

Sincerely,

ARNOLD PACKAGING

Murray R. White
Chief Operating Officer

MRW:gh

cc: B. Mitchell, FDER/BAQM
T. Tittle, DER
A. Bolivar, DERM } copies sent

AC 13-180 151

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA
DISTRICT
3301 GUN CLUB ROAD
P.O. BOX 3858
WEST PALM BEACH, FLORIDA 33402

DER
DEC 24 1986
BAQM

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ROY DUKE
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: *Flexographic Printing Presses* [ ] New[1] [X] Existing[1]

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

COMPANY NAME: *Arnold Cellophane Corporation* COUNTY: *DADE*

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) _____

SOURCE LOCATION: Street *20400 S.W. 112 Avenue* City *Miami*

UTM: East *17:563.2 KME* North *2828.6 KM N*

Latitude ____ ° ____ ' ____ "N Longitude ____ ° ____ ' ____ "W

APPLICANT NAME AND TITLE: *Murray R. White, Chief Operating Officer*

APPLICANT ADDRESS: *ARNOLD CELLOPHANE CORPORATION*
20400 S.W. 112 Avenue, Miami, FLorida 33157

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of *ARNOLD CELLOPHANE CORP.*

I certify that the statements made in this application for a*n air pollution source* 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: _____

Murray R. White, Chief Operating Officer
Name and Title (Please Type)

Date: *12/8/86* Telephone No. *305-238-5961*

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 _____

Clement Difillippo, A.I.A., P.E.
Name (Please Type)

Clement DiFillippo, Architects& Engineers
Company Name (Please Type)

1301 Dade Blvd., Miami Beach, FL 33139
Mailing Address (Please Type)

Florida Registration No. PE20321 Date: Dec. 17, 1986 Telephone No. (305) 672-6312

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.

See attached description and specification from Pillar Corp. and subcontractor to Pillar - Anquil Energy Systems for details and specifications. Control system will reduce VOC emissions delivered to it by 95% or more but will not reduce total emissions of all presses by 90%

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

Start of Construction *June 29, 1984* Completion of Construction *July 31, 1984*

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.)

Total pollution control and air handling system with heat recovery to be installed by vendor at $155,000.00. Auxiliary equipment to inter-connect electrical and mechanical to presses at $5,000. Total = $160,000.00

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

AO 13-50662, December 31, 1982 for presses 1,2,3,4

AC 13-55914, June 30, 1984 for press 5, construction permit

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 5 ; wks/yr 52 ;

if power plant, hrs/yr N/A ; if seasonal, describe: Not seasonal

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

1. Is this source in a non-attainment area for a particular pollutant? yes

   a. If yes, has "offset" been applied? no

   b. If yes, has "Lowest Achievable Emission Rate" been applied? no

   c. If yes, list non-attainment pollutants. Ozone

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

   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 add-on control system planned for these four presses will reduce VOC to carbon dioxide with a better than 90% conversion rate as measured by EPA Method 25 of all VOC delivered. This meets or exceeds requirements for BACT and RACT published by EPA for theoperation of an add-on control.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Flexographic Ink	*VOC*	*53.9*	*176.3*	*See attached*
Solvent	*VOC*	*100.0*	*157.3*	*Press Lay-out*

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

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)

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	
VOC	*187**	*280.5*	*N/A*	*93.5*	*561,000*	*280.5*	*Attached*
** estimate at two times allowable for any one hour in a 24 hour period.*							
Note the VOC emissions are constantly changing due to whether presses are running;							
being changed over to the next job; or down for mechanical reasons.							

[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).

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)
Pillar Corporation "COMCAT" 20,000 SCFM	*70% or more*	*90% or more*	*N/A*	*Vendor specification*

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas (system)	*Net 0*	*Net 0*	*Net 0*
	system is designed to recover heat by catalytic conversion		
	of VOC emissions. We expect to reduce natural gas consump-		
	tion on all presses by 80% including natural gas used to operate control device.		

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

Fuel Analysis:

Percent Sulfur: *.11 lbs. per MMCF* Percent Ash: *0*

Density: *0° C/1 atm = .00671* lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: *1025* BTU/lb *140.4 BTU's/gal* BTU/gal

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

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

Annual Average *none* Maximum *none*

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

This system will not generate any liquid or solid waste.

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

Stack Height: N/A ft. Stack Diameter: N/A ft.

Gas Flow Rate: N/A ACFM _____ DSCFM Gas Exit Temperature: 300 - 400 °F.

Water Vapor Content: variable % Velocity: variable 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

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.

(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.

ARNOLD CELLOPHANE CORPORATION

ATTACHMENT FOR SECTION II,A.

In summary, this modification is for add-on-control system for flexographic presses P1, P3, P4, and P5. Pillar Corporation and their subcontractor, Anquil Energy Systems have provided the attached a description of the equipment and schematics.

This system will reduce VOC emissions delivered to it by greater than 90%. It will not reduce total emissions from the presses by 90% because we are unable to capture or deliver more than 65% from presses 1,3, and 4 which are RACT standard and 70% from press 5 which is BACT standard. These estimated captures are based on EPA publications, EPA-450/2-78-033 and EPA-450/3-79-024. We do not know of any method to measure captured efficiency. In fact, we doubt that such a number could be reliably measured, calculated or estimated because of the dynamics and variability in the operation of our presses.

This system is the first add-on-control catalytic incineration unit with heat recovery for multiple flexographic presses.

The design and installation is a cooperative developmental effort between ourselves and Pillar Corporation. We plan to share operating data with our industry.

We believe that the project will satisfy the requirement of the Clean Air Amendments of 1977, and all Federal regulations for the reduction of VOC emissions using add-on-control of flexographic printing presses (Graphic Arts Systems).

ARNOLD PACKAGING

A HARGRO COMPANY

DER

DEC 24 1986

BAQM

December 21, 1986

Mr. C.H. Fancy
Deputy Bureau Chief
FDER/BAQM
2600 Blair Stond Road
Tallahassee, Florida 32301

Dear Sir:

Enclosed is the update application of a construction permit for P-5 press at Arnold. Due to a secretarial oversight, the letter we sent on Friday December 19th, contained the check but contained an old application.

Please accept my apologies for the mix up.

Sincerely,

ARNOLD PACKAGING

Murray R. White
Chief Operating Officer

MRW:gh

cc: B. Mitchell, FDER/BAQM
T. Tittle, DER
A. Bolivar, DERM

P.O. BOX 570370, 20400 S. W. 112 AVENUE / MIAMI, FL 33157 / 305 238-5961

AC 13-128731

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
3301 GUN CLUB ROAD
P.O. BOX 3858
WEST PALM BEACH, FLORIOA 33402

DER
DEC 24 1986
BAQM

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
ROY DUKE
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: *Flexographic Printing Presses* [ ] New[1] [X] Existing[1]

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

COMPANY NAME: *Arnold Cellophane Corporation* COUNTY: *DADE*

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) _____

SOURCE LOCATION: Street *20400 S.W. 112 Avenue* City *Miami*

UTM: East *17:563.2 KME* North *2828.6 KM N*

Latitude ____ ° ____ ' ____ "N Longitude ____ ° ____ ' ____ "W

APPLICANT NAME AND TITLE: *Murray R. White, Chief Operating Officer*

APPLICANT ADDRESS: *ARNOLD CELLOPHANE CORPORATION*
20400 S.W. 112 Avenue, Miami, FLorida 33157

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A. APPLICANT

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I certify that the statements made in this application for *an air pollution source* 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: _____

Murray R. White, Chief Operating Officer
Name and Title (Please Type)

Date: *12/8/86* Telephone No. *305-238-5961*

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 _____

Clement Difillippo, A.I.A., P.E.

Name (Please Type)

Clement DiFillippo, Architects& Engineers

Company Name (Please Type)

1301 Dade Blvd., Miami Beach, FL 33139

Mailing Address (Please Type)

Florida Registration No. PE20321 Date: Dec. 17, 1986 Telephone No. (305) 672-6312

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.

See attached description and specification from Pillar Corp. and subcontractor to Pillar - Anquil Energy Systems for details and specifications. Control system will reduce VOC emissions delivered to it by 95% or more but will not reduce total emissions of all presses by 90%

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

Start of Construction *June 29, 1984* Completion of Construction *July 31, 1984*

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.)

Total pollution control and air handling system with heat recovery to be installed by vendor at $155,000.00. Auxiliary equipment to inter-connect electrical and mechanical to presses at $5,000. Total - $160,000.00

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

AO 13-50662, December 31, 1982 for presses 1,2,3,4

AC 13-55914, June 30, 1984 for press 5, construction permit

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 5 ; wks/yr 52 ;

if power plant, hrs/yr N/A ; if seasonal, describe: Not seasonal

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

1. Is this source in a non-attainment area for a particular pollutant? yes

   a. If yes, has "offset" been applied? no

   b. If yes, has "Lowest Achievable Emission Rate" been applied? no

   c. If yes, list non-attainment pollutants. Ozone

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

   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 add-on control system planned for these four presses will reduce VOC to carbon dioxide with a better than 90% conversion rate as measured by EPA Method 25 of all VOC delivered. This meets or exceeds requirements for BACT and RACT published by EPA for theoperation of an add-on control.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Flexographic Ink	*VOC*	*53.9*	*176.3*	*See attached*
Solvent	*VOC*	*100.0*	*157.3*	*Press Lay-out*

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

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)

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	
VOC	*187**	*280.5*	*N/A*	*93.5*	*561,000*	*280.5*	*Attached*
** estimate at two times allowable for any one hour in a 24 hour period.*							
Note the VOC emissions are constantly changing due to whether presses are running;							
being changed over to the next job; or down for mechanical reasons.							

[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).

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)
Pillar Corporation "COMCAT" 20,000 SCFM	*70% or more*	*90% or more*	*N/A*	*Vendor specification*

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas (system)	*Net 0*	*Net 0*	*Net 0*
	system is designed to recover heat by catalytic conversion		
	of VOC emissions. We expect to reduce natural gas consump-		
	tion on all presses by 80% including natural gas used to operate control device.		

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

Fuel Analysis:

Percent Sulfur: *.11 lbs. per MMCF* Percent Ash: *0*

Density: *0° C/1 atm = .00671* lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: *1025* BTU/lb *140.4 BTU's/gal* BTU/gal

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

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

Annual Average *none* Maximum *none*

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

This system will not generate any liquid or solid waste.

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

Stack Height: *N/A* ft. Stack Diameter: *N/A* ft.

Gas Flow Rate: *N/A* ACFM _____ DSCFM Gas Exit Temperature: *300 - 400* °F.

Water Vapor Content: *variable* % Velocity: *variable* 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

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.

(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.

ARNOLD CELLOPHANE CORPORATION

ATTACHMENT FOR SECTION II,A.

In summary, this modification is for add-on-control system for flexographic presses P1, P3, P4, and P5. Pillar Corporation and their subcontractor, Anquil Energy Systems have provided the attached a description of the equipment and schematics.

This system will reduce VOC emissions delivered to it by greater than 90%. It will not reduce total emissions from the presses by 90% because we are unable to capture or deliver more than 65% from presses 1,3, and 4 which are RACT standard and 70% from press 5 which is BACT standard. These estimated captures are based on EPA publications, EPA-450/2-78-033 and EPA-450/3-79-024. We do not know of any method to measure captured efficiency. In fact, we doubt that such a number could be reliably measured, calculated or estimated because of the dynamics and variability in the operation of our presses.

This system is the first add-on-control catalytic incineration unit with heat recovery for multiple flexographic presses.

The design and installation is a cooperative developmental effort between ourselves and Pillar Corporation. We plan to share operating data with our industry.

We believe that the project will satisfy the requirement of the Clean Air Amendments of 1977, and all Federal regulations for the reduction of VOC emissions using add-on-control of flexographic printing presses (Graphic Arts Systems).

ARNOLD PACKAGING

A HARGRO COMPANY

DER

DEC 22 1986

BAQM

December 4, 1986

Mr. C.H. Fancy, P.E.
Deputy Bureau Chief
FDER/BAQM
2600 Blairstone Road
Tallahassee, Florida 32301

Dear Sir:

By way of introduction, I am the new Chief Operating Officer of Arnold Packaging a flexographic printer in Dade County. Bruce Mitchell asked me to write you to explain the expiration of a construction permit for a 6-color flexographic press, designated P-5.

Since my arrival on November 10th, our former Technical Manager, Mr. Charles Blue, left Arnold to go to a competitor in North Carolina. During the transition period the construction permit for P-5 was inadvertently allowed to expire in October.

I understand from Mr. Mitchell that a new application for a construction permit must be filed along with a fee.

Please find enclosed (a) a new construction permit application and (b) a check for $750.00, based on projected emissions of 68.4 tons/year. Thanks for your earliest consideration of our application.

Sincerely,

ARNOLD PACKAGING

Murray R. White
Chief Operating Officer

MRW:gh

cc: Bruce Mitchell, FDER/BAQM
T. Tittle, DER
A. Bolivar, DERM

RECEIVED
DER - MAIL ROOM
1986 DEC 23 AM 9:37

P.O. BOX 570370, 20400 S. W. 112 AVENUE / MIAMI, FL 33157 / 305 238-5961

STATE OF FLORIDA AC 13-125731

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
3301 GUN CLUB ROAD
P.O. BOX 3858
WEST PALM BEACH, FLORIDA 33402

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: *Flexographic Printing Presses* [ ] New[1] [X] Existing[1]

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

COMPANY NAME: *Arnold Cellophane Corporation* COUNTY: *DADE*

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) _____

SOURCE LOCATION: Street *20400 S.W. 112 Avenue* City *Miami*

UTM: East *17;563.2 KME* North *2828.6 KM N*

Latitude ____° ____' ____"N Longitude ____° ____' ____"W

APPLICANT NAME AND TITLE: *Murray R. White, Chief Operating Officer*

APPLICANT ADDRESS: *ARNOLD CELLOPHANE CORPORATION 20400 S.W. 112 Avenue, Miami, FLorida 33157*

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of *ARNOLD CELLOPHANE CORP.*

I certify that the statements made in this application for a*n air pollution source* 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: _____

Murray R. White, Chief Operating Officer
Name and Title (Please Type)

Date: *12/8/86* Telephone No. *305-238-5961*

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 _____

Clement Difillippo, A.I.A., P.E.
Name (Please Type)

_____
Company Name (Please Type)

1301 Dade Blvd., Miami Beach, FL.33139
Mailing Address (Please Type)

Florida Registration No. _____ Date: _____ Telephone No. _____

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.

See attached description and specification from Pillar Corp. and subcontractor to Pillar - Anquil Energy Systems for details and specifications. Control system will reduce VOC emissions delivered to it by 95% or more but will not reduce total emissions of all presses by 90%

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

Start of Construction *June 29, 1984* Completion of Construction *July 31, 1984*

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.)

Total pollution control and air handling system with heat recovery to be installed by vendor at $155,000.00. Auxiliary equipment to inter-connect electrical and mechanical to presses at $5,000. Total - $160,000.00

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

AO 13-50662, December 31, 1982 for presses 1,2,3,4

AC 13-55914, June 30, 1984 for press 5, construction permit

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 5 ; wks/yr 52 ;

if power plant, hrs/yr N/A ; if seasonal, describe: Not seasonal

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

1. Is this source in a non-attainment area for a particular pollutant? yes

   a. If yes, has "offset" been applied? no

   b. If yes, has "Lowest Achievable Emission Rate" been applied? no

   c. If yes, list non-attainment pollutants. Ozone

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

   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 add-on control system planned for these four presses will reduce VOC to carbon dioxide with a better than 90% conversion rate as measured by EPA Method 25 of all VOC delivered. This meets or exceeds requirements for BACT and RACT published by EPA for theoperation of an add-on control.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Flexographic Ink	*VOC*	*53.9*	*176.3*	*See attached*
Solvent	*VOC*	*100.0*	*157.3*	*Press Lay-out*

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

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)

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	
VOC	*187**	*280.5*	*N/A*	*93.5*	*561,000*	*280.5*	*Attached*
** estimate at two times allowable for any one hour in a 24 hour period.*							
Note the VOC emissions are constantly changing due to whether presses are running;							
being changed over to the next job; or down for mechanical reasons.							

[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).

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)
Pillar Corporation "COMCAT" 20,000 SCFM	*70% or more*	*90% or more*	*N/A*	*Vendor specification*

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas (system)	*Net 0*	*Net 0*	*Net 0*
	system is designed to recover heat by catalytic conversion		
	of VOC emissions. We expect to reduce natural gas consump-		
	tion on all presses by 80% including natural gas used to operate control device.		

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

Fuel Analysis:

Percent Sulfur: *.11 lbs. per MMCF* Percent Ash: *0*

Density: *0° C/1 atm = .00671* lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: *1025* BTU/lb *140.4 BTU's/gal* BTU/gal

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

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

Annual Average *none* Maximum *none*

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

This system will not generate any liquid or solid waste.

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

Stack Height: N/A ft. Stack Diameter: N/A ft.

Gas Flow Rate: N/A ACFM _____ DSCFM Gas Exit Temperature: 300 - 400 °F.

Water Vapor Content: variable % Velocity: variable 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

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.

(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.

ARNOLD CELLOPHANE CORPORATION

ATTACHMENT FOR SECTION II,A.

In summary, this modification is for add-on-control system for flexographic presses P1, P3, P4, and P5. Pillar Corporation and their subcontractor, Anquil Energy Systems have provided the attached a description of the equipment and schematics.

This system will reduce VOC emissions delivered to it by greater than 90%. It will not reduce total emissions from the presses by 90% because we are unable to capture or deliver more than 65% from presses 1,3, and 4 which are RACT standard and 70% from press 5 which is BACT standard. These estimated captures are based on EPA publications, EPA-450/2-78-033 and EPA-450/3-79-024. We do not know of any method to measure captured efficiency. In fact, we doubt that such a number could be reliably measured, calculated or estimated because of the dynamics and variability in the operation of our presses.

This system is the first add-on-control catalytic incineration unit with heat recovery for multiple flexographic presses.

The design and installation is a cooperative developmental effort between ourselves and Pillar Corporation. We plan to share operating data with our industry.

We believe that the project will satisfy the requirement of the Clean Air Amendments of 1977, and all Federal regulations for the reduction of VOC emissions using add-on-control of flexographic printing presses (Graphic Arts Systems).

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

April 8, 1986

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John P. Duhig
Chief Executive Officer
Arnold Cellophane Corporation
20400 S.W. 112th Avenue
Miami, Florida 33157

Dear Mr. Duhig:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit for the C-2 paper coating machine at your existing facility in Miami, Dade County, Florida.

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/pa

Attachments

cc: D. M. Ambrose, P.E.
Isidore Goldman
Patrick Wong

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 Arnold Cellophane Corporation for the installation of a coater/laminator designated C-2 at the applicant's existing facility at 20400 S.W. 112th Avenue in Miami, Dade County, 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 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 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, Florida Administrative Code, 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:

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

Dept. of Environmental Regulation
Southeast Florida District
3301 Gun Club Road
West Palm Beach, Florida 33402

Dade County Department of Environmental
Resources Management
801 S.W. 3rd Avenue
Miami, Florida 33131

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.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Arnold Cellophane Corporation
20400 S.W. 112th Avenue
Miami, Florida 33157

DER File No. AC 13-116138

INTENT TO ISSUE

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

The applicant, Arnold Cellophane Corporation, applied on February 17, 1986, to the Department of Environmental Regulation for a permit to install a coater/laminator designated C-2 to be located at the applicant's existing facility in Miami, Dade County, Florida.

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

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit application. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30) days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copies enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32301-8241. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed 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:

Mr. John P. Duhig
Mr. D. M. Ambrose, P.E.
Mr. Isidore Goldman
Mr. Patrick Wong

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on April 9, 1986.

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

Patricia G. Adams
Clerk

April 9 1986
Date

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.

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 an administrative determination (hearing) under Section 120.57, F.S.

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(4) Notice to substantially affected persons concerning applications for Department permits is an essential and integral part of the state environmental licensing process. Therefore, no application for a permit for which publication of notice is required shall be granted until and unless proof of publication of Notice is furnished to the appropriate Department permitting office.

(5)(a) Any applicant or person benefiting from the Department's action may elect to publish notice of proposed agency action in the manner provided by subsection (2) or (3). Any person who elects to publish notice of proposed agency action, upon presentation of proof of publication to the Department, prior to final agency action, shall be entitled to the same benefits under this rule as a person who is required to publish notice of proposed agency action. Since persons whose substantial interests are affected by a Department decision on a permit application may petition for an administrative proceeding within fourteen (14) days after receipt of notice and since, unless notice is given or published as prescribed in this rule, receipt of notice can occur at any time, the applicant or persons benefiting from the Department's action cannot justifiably rely on the finality of the Department's decision without the notice having been duly given or published.

(b) The notices required by this rule may be combined with other notices required by the Department pursuant to Chapter 403, 376, or 253, F.S., or Chapter 17, FAC.

(c) The provisions of this section shall also apply to the permitting of hazardous waste facilities, but only to the extent it is consistent with Chapter 17-30, Part IV, FAC. Whenever Chapter 17-30, Part IV, FAC, provides for a different time or notice procedure than that set forth in this section the time and notice provisions of Chapter 17-30 shall govern.

(6) Failure to publish any notice of application, notice of proposed agency action, or notice of agency action required by the Department shall be an independent basis for the denial of a permit.

Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S. History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.155 Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding.

(1)(a) Any person whose substantial interests may be affected by proposed or final agency action may file a petition for administrative proceeding. A petition shall be in the form required by this Chapter and Chapter 28-5, FAC, and shall be filed (received) in the Office of General Counsel of the Department within fourteen (14) days of receipt of notice of proposed agency action or within fourteen (14) days of receipt of notice of

agency action whenever there is no public notice of proposed agency action. In addition to the requirements of Rule 28-5.201, FAC, the Petition must specify the county in which the project is or will be located.

(b) Failure to file a petition within fourteen (14) days of receipt of notice of agency action or fourteen (14) days of receipt of notice of proposed agency action, whichever notice first occurs, shall constitute a waiver of any right to request an administrative proceeding under Chapter 120, F.S.

(c) When there has been no publication of notice of agency action or notice of proposed agency action as prescribed in Rule 17-103.150, FAC, a person who has actual knowledge of the agency action or has knowledge which would lead a reasonable person to conclude that the Department has taken final agency action, has a duty to make further inquiry within fourteen (14) days of obtaining such knowledge by contacting the Department to ascertain whether action has occurred. The Department shall upon receipt of such an inquiry, if agency action has occurred, promptly provide the person with notice as prescribed by Rule 17-103.150, FAC. Failure of the person to make inquiry with the Department within fourteen (14) days after obtaining such knowledge may estop the person from obtaining an administrative proceeding on the agency action.

(2)(a) "Receipt of notice of agency action" means receipt of written notice of final agency action, as prescribed by Department rule, or the publication, pursuant to Department rule, of notice of final agency action, whichever first occurs.

(b) "Receipt of notice of proposed agency action" means receipt of written notice (such as a letter of intent) that the Department proposes to take certain action, or the publication pursuant to Department rule of notice of proposed agency action, whichever first occurs.

(3) Notwithstanding any other provision in this Chapter, should a substantially affected person who fails to timely request a hearing under Section 120.57, F.S., administratively appeal the final Department action or order, the record on appeal should be limited to:

(a) the application, and accompanying documentation submitted by the applicant prior to the issuance of the agency's intent to issue or deny the requested permit.

(b) the materials and information relied upon by the agency in determining the final agency action or order;

(c) any notices issued or published; and

(d) the final agency action or order entered concerning the permit application.

(4) In such cases where persons do not timely exercise their rights accorded by Section 120.57(1), Florida Statutes, the allegations of fact contained in or incorporated by the final agency action shall be deemed uncontested and true, and appellants may not dispute the truth of such allegations upon subsequent appeal.

(5) Any applicant may challenge the Department's request for additional information by filing with the Office of General Counsel an appropriate petition for administrative proceeding pursuant to Section 120.60, F.S., following receipt by

the applicant of the Department's notification, pursuant to Section 403.0876, F.S., that additional information is required.
Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S.
History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.160 Uniformity in Approval and Denial of Applications for Department Permits and Certifications. To the extent possible and consistent with the public interest, the Department approves and denies applications for permits and certifications on a uniform and consistent basis. Final Department actions on applications for permits and certifications shall be consistent with prior Department actions, unless deviation therefrom is explained by the Department in writing or the hearing officer who submits a recommended order to the Department for final agency action in accordance with Section 120.57, Florida Statutes.
Specific Authority: 120.53(1), F.S. Law Implemented: 120.53(1), 120.68(12), F.S. History: New 2-6-78, Transferred from 17-1.63, 6-1-84.

17-103.170 Designation, Preparation and Transmittal of Record for Administrative Appeals.

When any Department action or order is the subject of an administrative appeal under Chapter 17-103, Part II, FAC, the following requirements shall apply:

(1) Designation of Record. Within fifteen (15) days of rendition of the Department's final order, the appellant shall designate to the Department, in writing, with copies to other parties, those documents or things under the control of or in the possession of the Department which the appellant desires to have included in the record, and which were received or considered in the Department proceeding below. If a proceeding was reported by mechanical recording devices, the appellant shall designate those portions of the proceeding for which it requires written transcription or tapes for transcription. Any other party may designate other portions of the record in the manner provided herein. Such cross-designation shall be filed with the Department, with copies provided other parties, within seven (7) days after receipt of the designation by the appellant.

(2) Original Record. The Department shall thereupon include in the record all of the designated portions of the original papers and exhibits in the proceedings or matter from which administrative appeal is taken, together with a copy of any such parts of the proceedings as were stenographically reported or transcribed from tapes, and as have been designated by the parties and certified by a notary public, the reporter, or other officer for inclusion in the record on appeal or review, and certified copies of the order, if any, of which review is sought. The Department may, at its discretion, substitute certified copies for original papers or documents in its possession.

(3) Preparation of Record. Upon tender or deposit by appellant of the estimated cost of preparation, the Department shall prepare the record in accordance with the designations of the parties. The cost of preparation, and reproduction,

Technical Evaluation
and
Preliminary Determination

Arnold Cellophane Corporation
Dade County
Miami, Florida

Permit Number:
AC 13-116138

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

April 8, 1986

I. Applicant and Source Location

A. Applicant

Arnold Cellophane Corporation
20400 Southwest 112th Avenue
Miami, Florida 33157

B. Project and Location

The applicant proposed and received a construction permit (AC 13-80716; issued February 18, 1985) to construct/install a new air pollution source designated as C-2, a coater/laminator, at its existing facility located at the above address in Dade County, Florida. The coater/laminator will have two associated high volume forced air driers/heaters that will be fired with natural gas. Since the permittee failed to obtain an extension of the expiration date or an operating permit, AC 13-80716 expired October 1, 1985, and the permittee/applicant is having to obtain another construction permit.

The UTM coordinates are Zone 17, 563.2 km East and 2828.6 km North.

C. Process and Controls

The coater/laminator is a two-coating station machine which can coat or laminate 52-inch wide rollstock up to 600 feet per minute. Average line speed is 350 feet per minute. Annual hours of operation are 8760.

The applicant intends to apply low solvent technology (LST) to achieve low VOC (volatile organic compounds and organic solvents) emissions. If LST is not achievable, an add-on control system will be required.

II. Rule Applicability

The pollutants to be emitted from the proposed project are VOC, particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), and sulfur dioxide (SO_2), pursuant to Florida Administrative Code (FAC) Rule 17-2.100.

The following (Table 1) will display the annual potential pollutant emissions in tons per year (TPY) from the existing facility (based on 1983 data), which includes the facility's newest source P-5 (AC 13-79884):

Table 1

Existing Facility	Potential Pollutant Emissions (TPY)				
	VOC	PM	NOx	CO	SO_2
Graphic Arts	477.3				
Paper Coating	617.1				
Driers/Heaters	0.04	0.04	0.80	0.17	trace
TOTAL:	1094.44				

*Note: ° Driers/Heaters: Emissions (products of combustion) based on AP-42 Emission Factors Table 1.4-1.
° Driers/Heaters: VOC emissions are estimated for nonmethane.

The existing facility is major for the pollutant VOC in accordance with FAC Rule 17-2.100(98) and is located in an area designated nonattainment for the pollutant ozone in accordance with FAC Rule 17-2.410(1)(d). VOC's are precursors to ozone.

The following (Table 2) will display the annual projected potential pollutant emissions in TPY for C-2:

Table 2

C-2	Projected Potential Pollutant Emissions (TPY)				
	VOC	PM	NOx	CO	SO_2
Coater/Laminator	36.0				
Drier/Heater	0.004	0.004	0.073	0.015	trace

*Note: ° C-2 unit is estimated to increase natural gas usage by 10% of the facility's 1983 usage.
° Drier/Heater: Emissions (products of combustion) based on AP-42 Emission Factors, Table 1.4-1.
° Drier/Heater: VOC emissions are estimated for nonmethane.

Since the projected potential VOC emissions for C-2 are less than the significant emission rates (40 TPY VOC) displayed in Table 500-2, pursuant to FAC Rule 17-2.510(2)(e)2., the source's VOC emissions shall be exempted from preconstruction review requirements pursuant to FAC Rule 17-2.510(4) in accordance with FAC Rule 17-2.510(2)(d)4.a., Modifications to Major Facilities. Because the projected potential emissions of PM, NO_x, CO, and SO_2 for C-2 are all less than the significant levels, no review shall be required pursuant to FAC Rule 17-2.500, Prevention of Significant Deterioration (PSD). Therefore, the source's pollutant emissions shall be reviewed in accordance with FAC Rule 17-2.520, Sources Not Subject to PSD on Nonattainment Requirements, and shall be permitted in accordance with FAC Rule 17-2.650(1)(f)3., Paper Coating/Reasonable Available Control Technology.

FAC Rule 17-2.650(1)(f)3.b. states that no owner or operator of a paper coating line may cause, allow, or permit the discharge into the atmosphere of any VOC in excess of 2.9 pounds per gallon of coating (0.35 killograms per liter), excluding water, delivered to the coating applicator from a paper coating line.

The control technology required, pursuant to FAC Rule 17-2.650(1)(f)3.c. are:

(i) The application of low solvent content coating technology; or,
(ii) Incineration, provided that 90 percent of the VOC (measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

As stated before, the applicant selected the control technology pursuant to FAC Rule 17-2.650(1)(4)3.c.(i).

In accordance with FAC Rule 17-2.700, Stationary Point Source Emissions Test Procedures, Table 1, the source, C-2, shall demonstrate compliance with FAC Rule 17-2.650(1)(4)3.c.(i), using EPA Method 24, Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, unless provided by the vendor(s). Using this information, the applicant shall demonstrate compliance with the provisions of FAC Rule 17-2.650(1)(f)3.b.

The source is subject to the provision of FAC Rule 17-2.620(1)(a), which states that no person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control

devices or systems deemed necessary and ordered by the Department. Therefore, some in-house preventive maintenance procedures shall be required to maintain minimum fugitive VOC (volatile organic compounds and organic solvents) emissions from the operation of C-2:

- maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
- where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
- all fittings, valves, lines, etc., shall be properly maintained;
- minimize air turbulence across any exposed VOC;
- all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
- maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

The source is subject to the provisions of FAC Rule 17-2.620(2), which states that no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. Therefore, objectionable odors shall not be allowed offplant property.

The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the DER's Southeast Florida District and the Dade County's Environmental Resources Management and file all written reports with the same offices.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

The RACT standard limits the laminator/coater designated C-2 to a maximum of 2.9 pounds of volatile organic compounds per gallon of coating (0.35 kilograms per liter), excluding water, delivered to the coating applcator from the coating line.

The VOC emissions shall be controlled by employing at least one of the following technologies to attain the RACT limit:

- the application of low solvent content coating technology; or,
- incineration, provided that 90 percent of the volatile organic compounds (VOC measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

Since the proposed source C-2 is projected to potentially emit 36 TPY of VOC, the source was not subject to preconstruction review requirements pursuant to FAC Rule 17-2.510(4). Therefore, any modifications and/or new source VOC emissions increase that exceeds 40 TPY, which shall include C-2's emissions of 36 TPY VOC, review in accordance with FAC Rule 17-2.510(4) shall be required on the proposed action.

The emission limitations are in compliance with the applicable requirements of FAC Chapter 17-2.

B. Air Quality Analysis

An air quality analysis was not required.

IV. CONCLUSIONS

With the application of the applicable RACT standard to the proposed coater/laminator designated C-2, the department has determined that the source will be in compliance with all applicable requirements of FAC Chapter 17-2.

If the applicant fails to achieve the emission limiting standard with the application of low solvent content coating technology, an incinerator with an associated vapor capture and transfer system shall be required in accordance with FAC Rule 17-2.650(1)(f)3.C.(ii).

The General and Specific Conditions are listed in the attached proposed permit.

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:
Arnold Cellophane Corporation
20400 Southwest 112th Avenue
Miami, Florida 33517

Permit Number: AC 13-116138
Expiration Date: October 31, 1986
County: Dade
Latitude/Longitude: 25° 34' 30" N
80° 22' 15" W
Project: Installation of a coater/ lamimator designated C-2

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

For the construction/installation of a new coater/laminator designated C-2. The unit will have two associated high volume forced air driers/heaters that will be fired with natural gas.

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted on pages 5-8 of the "Specific Conditions".

The Standard Industrial Codes are: Major Group-27: Printing, Publishing, and Allied Industries; Group Number-275: Commercial Printing; and, Industry Number-2751: Commercial Printing, Letterpress and Screen. The Source Classification Codes are: 4-02-013-01: Coating Operation; and, 4-02-013-99: Laminating.

Attachments are as follows:

1. Application to Construct Air Pollution Sources: DER Form 17-1.202., received 1/5/84.
2. C.H. Fancy's letter, dated 2/3/84.
3. Kenneth H. Speckhals' letter, with attachments, dated 4/17/84.
4. C.H. Fancy's letter, dated 5/14/84.
5. Kenneth H. Speckhals' letter, with attachments, dated 7/3/84.
6. C.H. Fancy's letter, dated 8/8/84.
7. Kenneth H. Speckhals' letter, dated 10/25/84.
8. Kenneth H. Speckhals' letter, dated 11/2/84.
9. Interoffice Memorandum, dated 11/26/84, from Bruce Mitchell.
10. "Waiver of 90 Day Time Limit", received 2/13/85, from Kenneth H. Speckhals.
11. Application to Construct Air Pollution Sources: DER Form 17-1.202, received 2/17/86.

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: AC 13-116138
Expiration Date: October 31, 1986

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. C-2 is subject to FAC Rule 17-2.650(1)(f)3.b., Emission Limiting Standards, which states that no owner or operator of a paper coating line may cause, allow, or permit the discharge into the atmosphere any volatile organic compounds or organic solvents (VOC) in excess of 2.9 pounds per gallon of coating (0.35 kilograms per liter), excluding water, delivered to the coating applicator from the paper coating line.

2. C-2 is subject to FAC Rule 17-2.650(1)(f)3.c., Control Technology, which states that the emission limit shall be achieved by:

(i) the application of low solvent content coating technology; or, (ii) incineration, provided that 90 percent of the VOC (measured as total combustible carbon) which enter the incinerator are oxidized to carbon dioxide and water.

SPECIFIC CONDITIONS:

3. In accordance with FAC Rule 17-2.700, Stationary Point Source Emissions Test Procedures, Table 1, the source, C-2, shall demonstrate compliance with FAC Rule 17-2.650(1)(4)3.c.(i), using EPA Method 24, Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings, unless provided by the vendor(s). Using this information, the applicant shall demonstrate compliance with the provisions of FAC Rule 17-2.650(1)(f)3.b.

4. The potential pollutant emissions projected for C-2 are:

C-2	Projected Potential Pollutant Emissions (TPY)				
	VOC	PM	NO_x	CO	SO_2
Coater/Laminator	36.0				
Drier/Heater	0.004	0.004	0.073	0.015	trace

*Note:
- C-2 unit is estimated to increase natural gas usage by 10% of the facility's 1983 usage.
- Drier/Heater: Emissions (products of combustion) based on AP-42 Emission Factors, Table 1.4-1.
- Drier/Heater: VOC emissions are estimated for nonmethane.

5. The source is subject to FAC Rule 17-2.620(1)(C), and some in-house preventive maintenance procedures will be required, but not limited to:

- maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
- where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
- all fittings, valves, lines, etc., shall be properly maintained;
- minimize air turbulence across any exposed VOC;
- all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
- maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

SPECIFIC CONDITIONS:

6. Objectionable odors shall not be allowed off plant property, pursuant to FAC Rule 17-2.620(2).

7. The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the DER's Southeast Florida District and DERM and file all written reports with the same offices.

8. Proposed operation is 24 hours per day, 7 days per week, and 52 weeks per year, or 8760 hours annually.

9. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the DER' Southeast Florida District and DERM 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: 116138
Expiration Date: October 31, 1986

SPECIFIC CONDITIONS:

Issued this_____day of_____,
19___.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

_____
VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

ATTACTMENTS 1-10

Available Upon Request

ATTACHMENT 11

Arnold Cellophane Corporation 20400 Southwest 112th Avenue · PO Box 570370
Miami · Florida 33157

Telephone 305 238·5961 Telex 51·5614

February 14, 1986

DER
FEB 17 1986
BAQM

Mr. Bruce Mitchell
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl. 32301-8241

RE: Enclosure of Permit Application for C-2 Paper Coating Machine and P-5 Flexographic Printing Press

Please find enclosed the referred to permit applications, three (3) copies each, and a check to cover the application fee of C-2 at $250.00, and P-5 at $500.00.

I have attached one set of reports referred to in P-5 application, and am sending one copy of each application to DER West Palm Beach, and to MCDERM.

Sincerely,

Kenneth H. Speckhals
Technical Manager

KHS:mrs
Encls.

cc: Tom Tittle, DER West Palm Beach
A. Bolivar, M.C. DERM

AC 13-116138

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
3301 GUN CLUB ROAD
P.O. BOX 3858
WEST PALM BEACH, FLORIDA 33402

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: *Paper Coating Machine* [X] New[1] [ ] Existing[1]

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

COMPANY NAME: *Arnold Cellophane Corporation* COUNTY: *Dade*

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) _____

SOURCE LOCATION: Street *20400 S.W. 112th Avenue* City *Miami*

UTM: East *17:563.2 Km E* North *2828.6 Km N*

Latitude ____° ____' ____"N Longitude ____° ____' ____"W

APPLICANT NAME AND TITLE: *John P. Duhig*

APPLICANT ADDRESS: *Arnold Cellophane Corporation, 20400 S.W. 112 Avenue, Mia, Fl 33157*

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of *Arnold Cellophane Corp.*

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

*Attach letter of authorization

Signed: _____

John P. Duhig
Name and Title (Please Type)

Date: *2/6/86* Telephone No. *305-238-5961*

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 D.M. Ambrose

D.M. Ambrose, P.E.
Name (Please Type)

D.M. Ambrose Associates, Inc.
Company Name (Please Type)

6190 N. Federal Highway, Boca Raton, Fla 33431
Mailing Address (Please Type)

Florida Registration No. 12831 Date: _____ Telephone No. 305-997-6790

SECTION II: GENERAL PROJECT INFORMATION

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

This application is to operate a coater/laminator that was constructed under Florida Permit #AC-13-80716, dated February 18, 1985/ I is now operating in full compliance to FAC Rule 17-2.650 (1),(f) 3.b.

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

Start of Construction April 1, 1984 Completion of Construction Oct. 1, 1986

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.)

Pollution control is accomplished by the use of low solvent material which will not exceed 2.9 lbs. VOC/gallon of coating applied less water.

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

AC #13-80716, October 1, 1985

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr _____; if seasonal, describe: not seasonal

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? Yes

   c. If yes, list non-attainment pollutants. ozone

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? No

   a. If yes, for what pollutants? _____

   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.

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

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

Formula Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
660@ 42%	VOC	3.9%	Less than 240 lb/hr.	
5060@ 40%	VOC	11.4%	"	
T-8@ 38%	VOC	14.4%	"	

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

1. Total Process Input Rate (lbs/hr): Not Applicable

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)

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/hr	T/yr	
VOC	84.3	9.12	2.9 lbs./gal	84.3	84.3	36.0	

[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).

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)
Not Applicable				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	*.00021*	*.00200*	*3,600,000 BTUS/hr.*

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

Fuel Analysis:

Percent Sulfur: *.11 lb. per MMCF* Percent Ash: *-0-*

Density: *0°C/Atm .00671* lbs/gal Typical Percent Nitrogen: *< 1%*

Heat Capacity: *1050 BTUS/CF* BTU/lb *140.4 Btus/gal.* BTU/gal

Other Fuel Contaminants (which may cause air pollution): *None*

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

Annual Average *-0-* Maximum *-0-*

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

Liquid waste diposed of by M&M Chemical, EPA permit #ALDO70513767 and Oldover Corporation, #FLD00737312 as fuel for boilers. Solid waste (non hazardous) as landfill.

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

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.

(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	Emiasion 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.

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

April 8, 1986

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. John P. Duhig
Chief Executive Officer
Arnold Cellophane Corporation
20400 S.W. 112th Avenue
Miami, Florida 33157

Dear Mr. Duhig:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit for flexographic printing press P-5 at your existing facility in Miami, Dade County, Florida.

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/pa

Attachments

cc: D. M. Ambrose, P.E.
Isidore Goldman
Patrick Wong

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 Arnold Cellophane Corporation to install a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5. The project will be located at the applicant's existing facility at 20400 S.W. 112th Avenue in Miami, Dade County, 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 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 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, Florida Administrative Code, 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:

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

Dept. of Environmental Regulation
Southeast Florida District
3301 Gun Club Road
West Palm Beach, Florida 33402

Dade County Department of Environmental
Resources Management
801 S.W. 3rd Avenue
Miami, Florida 33131

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.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Arnold Cellophane Corporation
20400 S.W. 112th Avenue
Miami, Florida 33157

DER File No. AC 13-116139

INTENT TO ISSUE

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

The applicant, Arnold Cellophane Corporation, applied on February 17, 1986, to the Department of Environmental Regulation for a permit to install a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5. The proposed construction will be located at the applicant's existing facility in Miami, Dade County, Florida.

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

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit application. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30) days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of

the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copies enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32301-8241. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed 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:

Mr. John P. Duhig
Mr. D. M. Ambrose, P.E.
Mr. Isidore Goldman
Mr. Patrick Wong

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on April 9, 1986.

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

Patricia G. Adams
Clerk

April 9, 1986
Date

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.

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 an administrative determination (hearing) under Section 120.57, F.S.

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(4) Notice to substantially affected persons concerning applications for Department permits is an essential and integral part of the state environmental licensing process. Therefore, no application for a permit for which publication of notice is required shall be granted until and unless proof of publication of Notice is furnished to the appropriate Department permitting office.

(5)(a) Any applicant or person benefiting from the Department's action may elect to publish notice of proposed agency action in the manner provided by subsection (2) or (3). Any person who elects to publish notice of proposed agency action, upon presentation of proof of publication to the Department, prior to final agency action, shall be entitled to the same benefits under this rule as a person who is required to publish notice of proposed agency action. Since persons whose substantial interests are affected by a Department decision on a permit application may petition for an administrative proceeding within fourteen (14) days after receipt of notice and since, unless notice is given or published as prescribed in this rule, receipt of notice can occur at any time, the applicant or persons benefiting from the Department's action cannot justifiably rely on the finality of the Department's decision without the notice having been duly given or published.

(b) The notices required by this rule may be combined with other notices required by the Department pursuant to Chapter 403, 376, or 253, F.S., or Chapter 17, FAC.

(c) The provisions of this section shall also apply to the permitting of hazardous waste facilities, but only to the extent it is consistent with Chapter 17-30, Part IV, FAC. Whenever Chapter 17-30, Part IV, FAC, provides for a different time or notice procedure than that set forth in this section the time and notice provisions of Chapter 17-30 shall govern.

(6) Failure to publish any notice of application, notice of proposed agency action, or notice of agency action required by the Department shall be an independent basis for the denial of a permit.

Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S. History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.155 Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding.

(1)(a) Any person whose substantial interests may be affected by proposed or final agency action may file a petition for administrative proceeding. A petition shall be in the form required by this Chapter and Chapter 28-5, FAC, and shall be filed (received) in the Office of General Counsel of the Department within fourteen (14) days of receipt of notice of proposed agency action or within fourteen (14) days of receipt of notice of

agency action whenever there is no public notice of proposed agency action. In addition to the requirements of Rule 28-5.201, FAC, the Petition must specify the county in which the project is or will be located.

(b) Failure to file a petition within fourteen (14) days of receipt of notice of agency action or fourteen (14) days of receipt of notice of proposed agency action, whichever notice first occurs, shall constitute a waiver of any right to request an administrative proceeding under Chapter 120, F.S.

(c) When there has been no publication of notice of agency action or notice of proposed agency action as prescribed in Rule 17-103.150, FAC, a person who has actual knowledge of the agency action or has knowledge which would lead a reasonable person to conclude that the Department has taken final agency action, has a duty to make further inquiry within fourteen (14) days of obtaining such knowledge by contacting the Department to ascertain whether action has occurred. The Department shall upon receipt of such an inquiry, if agency action has occurred, promptly provide the person with notice as prescribed by Rule 17-103.150, FAC. Failure of the person to make inquiry with the Department within fourteen (14) days after obtaining such knowledge may estop the person from obtaining an administrative proceeding on the agency action.

(2)(a) "Receipt of notice of agency action" means receipt of written notice of final agency action, as prescribed by Department rule, or the publication, pursuant to Department rule, of notice of final agency action, whichever first occurs.

(b) "Receipt of notice of proposed agency action" means receipt of written notice (such as a letter of intent) that the Department proposes to take certain action, or the publication pursuant to Department rule of notice of proposed agency action, whichever first occurs.

(3) Notwithstanding any other provision in this Chapter, should a substantially affected person who fails to timely request a hearing under Section 120.57, F.S., administratively appeal the final Department action or order, the record on appeal should be limited to:

(a) the application, and accompanying documentation submitted by the applicant prior to the issuance of the agency's intent to issue or deny the requested permit.

(b) the materials and information relied upon by the agency in determining the final agency action or order;

(c) any notices issued or published; and

(d) the final agency action or order entered concerning the permit application.

(4) In such cases where persons do not timely exercise their rights accorded by Section 120.57(1), Florida Statutes, the allegations of fact contained in or incorporated by the final agency action shall be deemed uncontested and true, and appellants may not dispute the truth of such allegations upon subsequent appeal.

(5) Any applicant may challenge the Department's request for additional information by filing with the Office of General Counsel an appropriate petition for administrative proceeding pursuant to Section 120.60, F.S., following receipt by

the applicant of the Department's notification, pursuant to Section 403.0876, F.S., that additional information is required.
Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S.
History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.160 Uniformity in Approval and Denial of Applications for Department Permits and Certifications. To the extent possible and consistent with the public interest, the Department approves and denies applications for permits and certifications on a uniform and consistent basis. Final Department actions on applications for permits and certifications shall be consistent with prior Department actions, unless deviation therefrom is explained by the Department in writing or the hearing officer who submits a recommended order to the Department for final agency action in accordance with Section 120.57, Florida Statutes.
Specific Authority: 120.53(1), F.S. Law Implemented: 120.53(1), 120.68(12), F.S. History: New 2-6-78, Transferred from 17-1.63, 6-1-84.

17-103.170 Designation, Preparation and Transmittal of Record for Administrative Appeals.

When any Department action or order is the subject of an administrative appeal under Chapter 17-103, Part II, FAC, the following requirements shall apply:

(1) Designation of Record. Within fifteen (15) days of rendition of the Department's final order, the appellant shall designate to the Department, in writing, with copies to other parties, those documents or things under the control of or in the possession of the Department which the appellant desires to have included in the record, and which were received or considered in the Department proceeding below. If a proceeding was reported by mechanical recording devices, the appellant shall designate those portions of the proceeding for which it requires written transcription or tapes for transcription. Any other party may designate other portions of the record in the manner provided herein. Such cross-designation shall be filed with the Department, with copies provided other parties, within seven (7) days after receipt of the designation by the appellant.

(2) Original Record. The Department shall thereupon include in the record all of the designated portions of the original papers and exhibits in the proceedings or matter from which administrative appeal is taken, together with a copy of any such parts of the proceedings as were stenographically reported or transcribed from tapes, and as have been designated by the parties and certified by a notary public, the reporter, or other officer for inclusion in the record on appeal or review, and certified copies of the order, if any, of which review is sought. The Department may, at its discretion, substitute certified copies for original papers or documents in its possession.

(3) Preparation of Record. Upon tender or deposit by appellant of the estimated cost of preparation, the Department shall prepare the record in accordance with the designations of the parties. The cost of preparation, and reproduction,

Technical Evaluation
and
Preliminary Determination

Arnold Cellophane Corporation
Dade County
Miami, Florida

Permit Number:
AC 13-116139

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

April 8, 1986

I. Project Description

A. Applicant

Arnold Cellophane Corporation
20400 Southwest 112th Avenue
Miami, Florida 33157

B. Project and Location

A construction permit, No. AC 13-55914, was issued on November 2, 1982, for the construction/installation of a new flexographic printing press and associated natural gas fired drier/heater, designated P-5 (originally P-6), pursuant to Florida Administrative Code (FAC) Rule 17-2.650(1)(f)16., Graphic Arts Systems. Because low solvent technology (LST) was unachievable with P-5, the applicant applied for and received a construction permit (AC 13-79884; issued on January 18, 1985) to install a catalytic incinerator with an associated vapor capture and transport system, whose minimum performance efficiencies were based on a LAER determination and incorporated in the Specific Conditions. Since the permittee failed to obtain an extension of the expiration date or an operating permit, AC 13-79884 expired on September 1, 1985, and the permittee/applicant is having to obtain another construction permit.

The existing facility is located at the above address in Dade County, Florida, with UTM coordinates of Zone 17, 563.2 km East and 2828.6 km North.

C. Process and Controls

Flexographic printing press P-5 will use primarily polypropylene film substrates and is scheduled to operate 8760 hours per year.

The flexographic printing process uses a rubber image carrier located above the surface of the plate, is usually web fed, and runs on a variety of substrates. After the application of a solvent based ink to the surface of a moving web or film, the solvent is evaporated using heated air produced by the associated drier/heater. The solvent laden air is then exhausted into the atmosphere or through a control device with an associated vapor capture and transport system.

The applicant proposes to install a ComCat catalytic incinerator manufactured by Pillar Corporation. Necessary enclosures and ducting will be installed to capture the pollutant vapors emitted during the drying process. A determination of LAER (Lowest Achievable Emission Rate) will be proposed to establish the overall vapor capture and transport efficiency for

the VOC delivered to the substrate and the final destruction efficiency for the catalytic incinerator of the VOC delivered to the inlet of the incinerator.

Some in-house preventive maintenance procedures will be required to maintain minimum fugitive VOC (volatile organic compounds and organic solvents) emissions from the operation of P-5:

- maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
- where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
- all fittings, valves, lines, etc., shall be properly maintained;
- minimize air turbulence across any exposed VOC;
- all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
- maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

II. Rule Applicability

The pollutants projected to be emitted from P-5 are VOC, particulate matter (PM), nitrogen oxides (NO_x), carbon monoxide (CO), and sulfur dioxide (SO_2), in accordance with FAC Rule 17-2.100.

The following (Table 1) will display the annual potential pollutant emissions in tons per year (TPY) from the existing facility and based on 1983 data:

Table 1

Existing Facility	Potential Pollutant Emissions (TPY)				
	VOC	PM	NO_x	CO	SO_2
Graphic Arts	613.3				
Paper Coating	617.1				
Driers/Heaters	0.04	0.04	0.73	0.15	trace
TOTAL:	1230.44				

*Note:
- Driers/Heaters: Emissions (products of combustion) based on AP-42 Emission Factors Table 1.4-1.
- Driers/Heaters: VOC emissions are estimated for nonmethane.

The existing facility is major for the pollutant VOC in accordance with FAC Rule 17-2.100(98) and is located in an area designated nonattainment for the pollutant ozone in accordance with FAC Rule 17-2.410(1)(d). VOC's are precursors to ozone.

The following (Table 2) will display the annual projected potential pollutant emissions in TPY for P-5:

Table 2

P-5	Projected Potential Pollutant Emissions (TPY)				
	VOC	PM	NO_x	CO	SO_2
Flexographic printing press	204.2				
Drier/heater	0.004	0.004	0.073	0.015	trace

*Note:
- P-5 unit is estimated to increase natural gas usage by 10% of the facility's current usage.
- Drier/heater: Emissions (products of combustion) based on AP-42 Emission Factors, Table 1.4-1.
- Drier/heaters: VOC emissions are estimated for nonmethane.

The VOC potential emissions projected for P-5 shall be reviewed in accordance with FAC Rule 17-2.510, New Source Review for Non-attainment Areas.

Since the projected potential VOC emissions for P-5 are greater than the significant emission rates (40 TPY VOC) displayed in Table 500-2, pursuant to FAC Rule 17-2.510(2)(e)2., the source's VOC emissions shall be reviewed in accordance with FAC Rule 17-2.510(2)(d) 4.a., Modifications to Major Facilities. Therefore, P-5 shall be subject to the provisions of FAC Rule 17-2.510(4), Preconstruction Review Requirements.

Under FAC Rule 17-2.510(4)(a), P-5 is subject to a determination of LAER on the affected pollutant VOC. LAER is to be determined in accordance with FAC Rule 17-2.640. For LAER, the applicant proposed to retrofit a catalytic incinerator with a capture and transport system, having an overall capture efficiency of 70% of the VOC delivered to the substrate and a 95% total destruction of the VOC captured and transported to the

inlet of the catalytic incinerator. The bureau proposes that LAER (see attachment) be the same as that requested by the applicant. Therefore, with the application of LAER, the following (Table 3) will exhibit the projected VOC potential emissions in TPY:

Table 3

	Projected VOC Potential Emissions (TPY)
P-5	68.4

Note: ° Based on 70% overall capture and transport efficiency of the VOC delivered to the substrate and 95% total destruction of the VOC captured and transported to the inlet of the catalytic incinerator.

In order to comply with the provisions of FAC Rule 17-2.510(4)(b), Arnold Cellophane Corporation signed a Delayed Compliance Consent Order (DCO) with the department for the existing facility. The DCO was signed on September 10, 1984. Since a DCO is subject to USEPA Region IV approval, the proposed rule (DCO) appeared in the Federal Register, Vol. 49, No. 196, dated October 9, 1984.

Pursuant to FAC Rule 17-2.510(4)(c), there is sufficient new source allowance for Dade County, as displayed in Table 510-1, to allow the construction/installation of P-5. Therefore, VOC emission offsets shall not be required.

Because the new source allowance of VOC is available, the proposed project satisfies the provisions of FAC Rule 17-2.510(4)(d)1.a., Net Air Quality Improvement Requirement - Nonattainment Areas with Approved SIP.

Satisfying the review of the affected pollutant VOC, pursuant to FAC Rule 17-2.510(2)(d)4.a., the VOC emission standards will be permitted in accordance with the proposed LAER determination, pursuant to FAC Rule 17-2.510(4)(a).

The products of combustion of the natural gas in the associated drier/heater are less than 0.10 TPY (see Table 2) and will become a part of the waste stream captured and transported to and oxidized by the catalytic incinerator.

A compliance test will be required to ascertain the actual overall collection and destruction efficiencies of the retrofitted VOC control system pursuant to the proposed LAER determination and will be accomplished by the following:

° The destruction efficiency of the catalytic incinerator of the pollutant vapors delivered to it shall be determined by establishing and comparing the inlet and outlet concentrations using EPA Method 25, which is the test method required of sources with add-on destructive control devices that are subject to FAC Rule 17-2.650(1)(f)16.b.(1)(C) and pursuant to FAC Rule 17-2.700, Stationary Point Source Emissions Test Procedures.

° Since there is no official EPA test method for measuring capture and transport efficiency, the following methodology will be utilized:

-the determination of the volatile organic matter content and the density of the printing inks shall be in accordance with 40 CFR 60, Appendix A, Method 24A or as provided from the vendor(s).
-a 24-hour testing cycle is to be used and is to represent a typical operating cycle.
-capture and transport efficiency is to be assessed using the following formula, which is based on measurements and/or calculations:

capture and transport efficiency	=	mass of VOC delivered to the incinerator inlet/time	÷	mass of VOC delivered to the substrate/time

-all fugitive VOC emissions are to be accounted for: clean-up solvents, make-up solvents (solvents used to maintain ink viscosity), and solvent spillage make up the majority of the fugitive VOC emissions.

The source is subject to the provision of FAC Rule 17-2.620(1)(a), which states that no person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the department. Therefore, some in-house preventive maintenance procedures shall be required (see Section I.C.).

The source is subject to the provisions of FAC Rule 17-2.620(2), which states that no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. Therefore, objectionable odors shall not be allowed off plant property.

The source is subject to the provisions of FAC Rule 17-2.240, which states that no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. Therefore, an electrical interlock shall be installed such that P-5 is prevented from operating without its associated vapor control system.

The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the DER's Southeast Florida District and the Dade County's Environmental Resources Management and file all written reports with the same offices.

III. Summary of Emissions and Air Quality Analysis

A. Emission Limitations

In applying the provisions of FAC Rule 17-2.510(4), the source was subject to the determination of LAER. Efficiencies were established for the vapor control system to be retrofitted, which are "70% overall capture and transport of the VOC delivered to the substrate" and "95% total destruction of the VOC delivered to the catalytic incinerator inlet".

The emission limitations are in compliance with the applicable requirements of FAC Chapter 17-2.

B. Air Quality Analysis

An air quality analysis was not required.

IV. Conclusions

With the application of LAER requiring the installation of an add-on vapor control system, the VOC emissions reduction will be greater than with the application of the source specific RACT rule. Also, with the retrofitting of the same VOC control system to the existing facility's graphic arts system units (P-1, P-2, P-3, and P-4), the facility VOC emissions will be greatly reduced. For the VOC emissions from the existing facility's graphic arts system units, the applicant must only demonstrate 90% total destruction of the VOC delivered to the incinerator inlet when operating without P-5. However, whenever P-5 is to be operated with any of the existing graphic arts system units, the LAER established destruction efficiency shall prevail.

Since there is no approved method to assess an overall capture and transport efficiency, a post compliance test(s) review and comment period will be established with the applicant,

the Dade County's Environmental Resources Management, the DER's Southeast Florida District, the DER's Bureau of Air Quality Management, and the Region IV USEPA, to ascertain if the compliance test(s) did verify the guidelines established through the determination of LAER.

The General and Specific Conditions are listed in the attached proposed permit.

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:
Arnold Cellophane Corporation
20400 Southwest 112th Ave.
Miami, Florida 33157

Permit Number: AC 13-116139
Expiration Date: October 31, 1986
County: Dade
Latitude/Longitude: 25° 34' 30" N
80° 22' 15" W
Project: Installation of a catalytic incinerator with an associated capture and transport system on a flexographic printing press designated P-5

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

For the construction/installation of a catalytic incinerator with an associated capture and transport system to be retrofitted to the new flexographic printing press designated P-5 (originally P-6: see construction permits Nos. AC 13-55914, issued 11/2/82 and AC 13-79884, issued 1/18/85). The overall capture and transport efficiency and the destruction efficiency of the add-on control system was established in a LAER determination, pursuant to FAC Rule 17-2.510(4).

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted on pages 6-9 of the "Specific Conditions".

The Standard Industrial Codes are: Major Group-27: Printing, Publishing, and Allied Industries; Group Number-275: Commercial Printing; and, Industry Number-2751: Commercial Printing, Letterpress and Screen. The Source Classification Codes are: 4-05-003-01: Flexographic Printing.

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: AC 13-116139
Expiration Date: October 31, 1986

Attachments are as follows:

1. Construction permit No. AC 13-55914 and its attachments, modifications and amendments.
2. Kenneth H. Speckhals' letter, dated 12/16/83, with an Application to Construct Air Pollution Sources: DER Form 17-1.202.
3. Interoffice Memorandum, dated 1/9/84, from I. Goldman, T. Tittle and J. Guidry.
4. Victoria J. Tschinkel's letter with attachment, dated 1/16/84.
5. C.H. Fancy's letter, dated 1/17/84.
6. Kenneth H. Speckhals' letter with attachments, dated 1/30/84.
7. D.M. Ambrose's letter with attachments (includes updated application), dated 5/8/84.
8. C.H. Fancy's letter with attachment, dated 6/8/84.
9. Kenneth H. Speckhals' letter with attachments, dated 7/23/84.
10. Kenneth H. Speckhals' letter, dated 10/25/84.
11. Kenneth H. Speckhals' letter, dated 11/2/84.
12. Interoffice Memorandum, dated 11/19/84, from Bruce Mitchell.
13. I. Goldman's interoffice memorandum, dated 11/29/84.
14. Application to Construct Air Pollution Sources: DER Form 17-1.202, received 2/17/86.

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.

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.

GENERAL CONDITIONS:

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.

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.

GENERAL CONDITIONS:

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.
(x) Determination of Lowest Achievable Emission Rate (LAER).

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

a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.

GENERAL CONDITIONS:

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

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 source, designated P-5, is subject to the emission standards established through a determination of LAER, which requires "70% overall capture and transport efficiency of the VOC delivered to the substrate" and "95% total destruction of the VOC delivered to the inlet of a catalytic incinerator". The add-on catalytic incinerator is a ComCat manufactured by Pillar Corporation.

2. Compliance tests shall be required to verify the LAER determined efficiencies:

° Catalytic incinerator destruction efficiency:
-The inlet and outlet VOC concentrations shall be determined by using EPA Method 25. Dividing the outlet concentration by the inlet concentration will provide the penetration. Therefore, 1 - Penetration = destruction efficiency.

° Capture and transport efficiency:
-The volatile organic matter content and the density of the inks shall be determined using EPA Method 24A or is to be provided by the vendor(s).
-A testing cycle will be 24-hours in duration and is to be representative of a typical flexographic printing press opeation
-The capture and transport efficiency is to be assessed using the following formula, which is based on measurements and/or calculations:

$$\text{capture and transport efficiency} = \frac{\text{mass of VOC delivered to the incinerator inlet/time}}{\text{mass of VOC delivered to the substrate/time}}$$

SPECIFIC CONDITIONS:

-All fugitive VOC emissions are to be accounted for: clean-up solvents, make-up solvents (solvents used to maintain ink viscosity), and solvent spillage make up the majority of the fugitive VOC emissions.
-Final test results for review and comment shall be filed with the Department (Southeast Florida District and BAQM), DERM (Dade County Environmental Resources Management), and Region IV USEPA, as soon as practical, but no later than 45 days after the last sampling run of each test is completed.

3. The source is subject to FAC Rule 17-2.620(1)(C), and some in-house preventive maintenance procedures will be required, but not limited to:

° maintain tightly fitting covers, lids, etc., on all containers of VOC when they are not being handled, tapped, etc.;
° where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC so that it can be covered when not in use;
° all fittings, valves, lines, etc., shall be properly maintained;
° minimize air turbulence across any exposed VOC;
° all VOC spills shall be attended to immediately and the discardings properly disposed of, recycled, etc.; and,
° maintain a monthly accounting of the VOC per type such that the beginning inventory and deliveries are accounted for.

4. Objectionable odors shall not be allowed off plant property, pursuant to FAC Rule 17-2.620(2).

5. The source is subject to FAC Rule 17-2.240, which states that no person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. Therefore, an electrical interlock shall be installed such that P-5 is prevented from operating without its associated vapor control system.

6. The source is subject to the provisions of FAC Rule 17-2.250(1), (4), (5), and (6), Excess Emissions. Whenever a report of excess emissions is required, notify the DER's Southeast Florida District and DERM and file all written reports with the same offices.

SPECIFIC CONDITIONS:

7. Whenever this source is being operated with other graphic arts system units (designated P-1, P-2, P-3, and P-4), the catalytic incinerator shall be required to meet the emission standard established through the determination of LAER, which is "95% total destruction of the VOC delivered to the inlet of the catalytic incinerator". A compliance test to verify the destruction efficiency shall be required by the expiration date of this permit and prior to obtaining an operating permit.

8. Proposed operation is 24 hours per day, 7 days per week, and 52 weeks per year, or 8760 hours annually.

9. The department (Bureau of Air Quality Mangement and Southeast Florida District) shall be given 20 days prior notice of the scheduled test date in order to arrange for a pre-test meeting. Metropolitan Dade County Environmental Resources Management and Region IV United States Environmental Protection Agency shall also be notified at the same time.

10. The test data shall include the temperature at the inlet, at the bed, and at the outlet of the incinerator for the tested conditions, which will be determined at the pre-test conference.

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the DER's Southeast Florida District and DERM 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

PERMITTEE:
Arnold Cellophane Corporation

Permit Number: AC 13-116139
Expiration Date: October 31, 1986

SPECIFIC CONDITIONS:

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

Issued this_____day of_____,
19 __.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

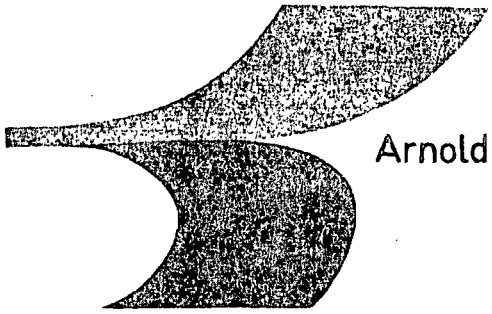
_____
VICTORIA J. TSCHINKEL, Secretary

____ pages attached.

ATTACHMENTS 1-13

Available Upon Request

ATTACHMENT 14



Arnold Cellophane Corporation 20400 Southwest 112th Avenue · PO Box 570370
Miami · Florida 33157

Telephone 305 238-5961 Telex 51-5614

February 14, 1986

Mr. Bruce Mitchell
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl. 32301-8241

RE: Enclosure of Permit Application for C-2 Paper Coating Machine and P-5 Flexographic Printing Press

Please find enclosed the referred to permit applications, three (3) copies each, and a check to cover the application fee of C-2 at $250.00, and P-5 at $500.00.

I have attached one set of reports referred to in P-5 application, and am sending one copy of each application to DER West Palm Beach, and to MCDERM.

Sincerely,

Kenneth H. Speckhals
Technical Manager

KHS:mrs
Encls.

cc: Tom Tittle, DER West Palm Beach
A. Bolivar, M.C. DERM

AC 13-116139

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHEAST FLORIDA DISTRICT
3301 GUN CLUB ROAD
P.O. BOX 3858
WEST PALM BEACH, FLORIDA 33402

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: *Flexographic Printing Press* [X] New[1] [ ] Existing[1]

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

COMPANY NAME: *Arnold Cellophane Corporation* COUNTY: *Dade*

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) *P-5*

SOURCE LOCATION: Street *20400 S.W. 112th Ave.,* City *Miami*

UTM: East *17:563.2 KME* North *2828.6 KM N*

Latitude ____° ____' ____"N Longitude ____° ____' ____"W

APPLICANT NAME AND TITLE: *John P. Duhig*

APPLICANT ADDRESS: *Arnold Cellophane Corp,20400 S.W. 112 Ave., Miami, Fla. 331*

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of *Arnold Cellophane Cor*

I certify that the statements made in this application for a *Air Pollution Source* 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: *J. P. Duhig*

John P. Duhig, Chief Exec. Officer
Name and Title (Please Type)

Date: *2/6/86* Telephone No. *305-238-5961*

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 D.M. Ambrose

D.M. Ambrose, P.E.
Name (Please Type)

D.M. Ambrose Associates, Inc.
Company Name (Please Type)

6190 N. Federal Highway, Boca Raton, Fla. 33431
Mailing Address (Please Type)

Florida Registration No. 12831 Date: _____ Telephone No. 305-997-6790

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.

P-5 was constructed under permit #AC13-55914 to operate with LST inks. This technology failed for technical and economic consideration. The permit was modified to install a catalytic incinerator. Existing presses P-3, P-4, P-1 were connected to this incinerator. Test reports are attache

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

Start of Construction November 1984 Completion of Construction September 6, 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.)

Actual cost of Pillar "Comcat" incinerator system is $219,856. Development cost to implement LST ink not estimated.

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

AC-1355914 Construction Permit for P-5

AC13-79884 Modification of Construction Permit to install incinerator.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr ____ ; if seasonal, describe: ____

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? *Yes*

   b. If yes, has "Lowest Achievable Emission Rate" been applied? *Yes*

   c. If yes, list non-attainment pollutants. *Ozone*

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. *Yes*

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? *No*

   a. If yes, for what pollutants? ____

   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.

See attached LAER determination, October 25, 1985

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
White Ink	*VOC*	*50*	*Not Applicable*	
Color Ink	*VOC*	*60*		
Ethyl Alcohol	*VOC*	*100*		
N. Propyl Alc.	*VOC*	*100*		
N.P. Acetate	*VOC*	*100*		

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

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)

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/HR	T/yr	
VOC	*32.7*	*54.1*	*68.4 TPY*	*15.6*	*46.7*	*204.2*	

[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).

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)
Pillar "Comcat"				
20,000 CFM				
Catalytic				
Incinerator	*VOC*	*95+*	*N/A*	*U.S. EPA Method 25*

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Natural Gas	*.00021*	*.00200*	*2.00MM*

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

Fuel Analysis:

Percent Sulfur: *.11 lb. per MMCF* Percent Ash: *0*

Density: *0°C /Atm = .00671* lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: *1025* BTU/lb *140.4* BTU/gal

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

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

Annual Average *None* Maximum *None*

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

Liquid waste disposed of by M & M Chemical, EPA permit ALD #070513762 and Oldover Corporation #FLD00737312 as fuel for boilers. Solid waste (non-hazardous) as land fill.

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

Stack Height: N/A ft. Stack Diameter: N/A ft.

Gas Flow Rate: N/A ACFM DSCFM Gas Exit Temperature: 300 to 400 °F.

Water Vapor Content: Variable % Velocity: Variable 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:

It is a catalytic incinerator that uses a cerium modified manganese dioxide pellet type catalyst. The catalyst will convert low concentration of VOC to CO_2 and water at inlet temperature as low as 450° with conversion efficiencies typically over 95% destruction.

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

CO_2 and Water

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

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.

(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.

ARNOLD CELLOPHANE CORPORATION

Determination of Capture Efficiency of P-5
for Construction Permit AC13-07884

August 15, 1985

Kenneth Speckhals

Charles Blue

Table of Contents

1. INTRODUCTION

In our discussions with the U.S.E.P.A. on capture efficieny measurement, we learned that there was no offically sanctioned method. We received instructions from the Florida DER that we must perform a mass balance, keeping track of all solvents and inks delivered to the press and measure all VOC eluted from the stack over a period of 24 hours.

In discussion with consulting engineers and laboratories, we were unable to find people who were experienced and could certify results with proven methodology for measuring capture efficiency of a flexographic printing press. The method used in this study was of the authors design and represented the best analytical techniques available to Arnold Cellophane Corporation.

The study of capture of VOC emmisions which were delivered to the catalytic incineration system on flexographic presses consisted of a series of measurements over a 24 hour period.

A precision gas chromatograph was used to quantify mass flow rate during the test. Air samples were removed from the exhaust of P-5 at intervals of 30 minutes or less while the press exhausts were on. The air samples were analyzed immediately by the GC so that no storage errors were encountered. A record of the the status of the press was kept by a person who served as a test supervisor as well as the operator of the GC and other equipment. Samples of all inks at the start and end of the test were taken and VOC content was determined. All ink and solvents used were accounted for.

Duplication of test measurements and verification of test method was designed into this program. A redundant method was attempted to verify overall accuracy of this test and to provide confidence in the test results. This method involved a new untried technique to verify mass flow rates of the solvent and press exhaust. High purity propane was released into the press exhaust stack at a controlled rate. The propane was to serve as a calibration gas for quantification of air flow measurement and changes in mass flow rate of of the printing solvents during the test period. Unforseen problems developed with this method, preventing the incorporation of the data in the calculations and mass balance.

2. APPARATUS

2.1 Gas chromatograph and accessories

A Hewlett Packard Model 5840 GC equipped with and Carbopack SP1000 column and automatic gas sampling valve was used. The loading accessory valves were our design and have been in use for five years. A laboratory vacumn pump was used to pull sample from the stack of P-5 into the automatic sampling loop.

2.2 Pitot tube and pressure gauges to measure air velocity

The pitot tube and pressure gauges were made by Dwyer Instruments, Inc. The gauge was a" Magnehelic" that read 0 to 1.0 inch of water.

2.3 Propane tank and accessories

A tank of propane at 99% purity with low pressure regulator was used. Flow was controlled with a Dwyer rotometer which was calibrated using a balance that measured to the nearest 0.1 lb.

2.4 Calibration equipment and supplies

2.4.1 4 mil Tedlar bag with 5.6 liter volume
2.4.2 Hamilton 10 microliter syringe
2.4.3 Hamilton 25 microliter syringe
2.4.4 Precision balance reads to 1 mg.
2.4.5 Bubble meter and stop watch
2.4.6 Ink grade solvents
2.4.7 Various equipment to measure VOC content of inks

3. METHODS AND CALCULATIONS

3.1 Air flow measurement by pitot tube

Measurement of the combined OHD and BCD stack exhaust was done just prior to the entrance into the input plenum of the incineration system. The duct was retangular 33.5 by 22.5 inches for a total of 5.23 sq ft. The following air pressure measurements were made using a pitot tube and Magnehelic 0 to 1 in water gauge. Measurements in the table below were in inches of water.

Distance from top	across, and south down		
	5.5"	16.5"	28"
4"	0.25	0.22	0.20
11.5"	0.25	0.25	0.23
18.5"	0.25	0.23	0.22

Air temperature in duct at 115 F, barometric pressure at 30.07 inches and 77% relative humidity.

Average pressure = 0.233 inches of water

Air velocity calculated using Bulletin H-11 method in appendix is 2010 feet per minute

Air volume is 2010 * 5.23 = 10512 cuft/min

3.2 Standardization of GC

A "standard" solvent solution was prepared using ink grade solvents weighed on a precision balance. The mixture contained the following:

ethyl alcohol	38.77%
normal propyl alcohol	40.13%
normal propyl acetate	21.10%

specific gravity = .793

A 5.6 liter Tedlar gas sampling bag was filled using compressed pure air. Accuracry of the fill was controlled by a precision flow control valve the was calibrated using a bubble meter and stop watch.

Exactly 8.0 microliters of standard was injected into the bag which was then warmed to 100 F for 60 minutes to allow the solvent to diffuse. The bag was then attached to the automatic gas sampling valve on the HP5840 and auto injection was initiated. Three calibration were prepared with the results averaged as the ESTD (external standardization) method described in the Hewlett Packard manual.

Concentrations of the solvents were calculated in mg/l and entered directly into the integrator on the GC as follows:

	mg/l	
ethyl alcohol	0.439	CAL#3
normal propyl alcohol	0.455	CAL#4
normal propyl acetate	0.239	CAL#1

Propane was used as a tracer gas and to assist in quantification. 0.25 ml was injected to give a concentration of 45 ppm which was entered in the GC as CAL#2

3.3 Recordkeeping and supervision during test

All records on the movement of ink and solvent during the 24 hour test were kept by one person who additionally ran the GC. Any change in status of the press such as shutdown was recorded with the time the change occured. The GC was placed nearby P-5 so that the operation and movement of materials could be observed at all times.

3.4 Operation of the GC and placement of the probes

A 1/4 inch copper line was placed into the OHD/BCD combined exhaust about 6 inches before it entered the intake plenum of the incinerator. This position was selected as the best location for adaquate mixing of the OHD/BCD combined stacks. It was the same position as the air velocity/ volume measurements were made. About 50 ft. of line was used to connect to the GC. A vacuum pump was used to draw the sample to the GC as well as into the gas sampling loop auto injection valve. Samples were analyzed about every 30 minutes which was the minimun time to complete the GC program.

3.5 Determination of total amount of VOC used

Samples in vials of each ink container were taken at the beginning and end of the test. The test was started while the press was running and not during a setup, so the ink that was in the fountains was removed, weighed, sampled then returned to the fountain. The VOC content was determined and the amount of VOC actually used calculated. All of this data is summarized on the "Material Balance For Capture Efficiency" and appears in the appendix. The amount was 1136 lbs VOC.

3.6 Determination of the amount of VOC delivered to incinerator

A continous log was kept on the status of the press, when the press speed and condition of the blower/exhaust changed. This was necessary so that mass flow rate could be calculated for each condition and time interval, then integrated into a total lbs. of VOC out the stack.

A complete summary of all data including the calculated lbs. VOC delivered to the incinerator is in the appendix. The following example illustrates the method of calculation and recordkeeping.

3.6.1 At the start of the test the ink was removed and weighed, sampled then returned to the pumps.The test was started at 17:00 hours and HP RUN #7 was started shortly thereafter. The analysis was complete by 17:40 hours. Since no change in the status of the press occured during the 40 minutes lapse, the results were deamed representative and the lbs of VOC were calcuated base on this result. Had the press stopped, for example, after 10 minutes, the lbs of VOC for 10 minutes would have been calculated instead.

3.6.2 To determine the lbs VOC emitted during the 40 minute interval, the sum of the calibration amounts #1, #3 and #4 was multiplied by the total minutes of the interval and then by a conversion factor.

(CAL#1+CAL#3+CAL#4) * (minutes in interval) * (conversion factor) = lbs VOC during interval

3.6.3 The conversion factor was calculated as:

1(mg/l) * 28.3(l/cuft) * 10512(cuft/min) / 1000(mg/g) / 453.6(g/lb) = 0.6558(lbs l/mg min)

The 10512(cuft/min) was the air volume as measured and calculated in 3.1.

3.6.4 The total lbs. VOC was the sum of all the interval measurements during the 24 hour test. The interval measurement corralate to the log entries. The amount was 821 lbs. VOC.

At times the press status changed too quickly to analyze the stack. For example, at 19:07 hours the press was down for 12 minutes which occured between GC runs where the was not sufficient time to draw a new sample and start a run. In this case data from a later (HP RUN #17) was uses a representstive of the time interval and press status. This occured on several occasion and accounts for the apparent duplication of HP RUN's.

The use of propane for calibration did not provide meaningful information because of unforseen instrument integration variations. This problem did not occur with the principle solvents in the inks. The data was included in the report since it was part of the test plan.

3.7 Capture efficiency calculation of P-5

From the data and calculations as it appears in the appendix the capture efficiency was determined as equal to

100% * (lbs VOC delivered to incinerator / lbs VOC used)

The capture efficiency was determined as:

100% * (821.39 / 1136) = 72.3%

4. Conclusion

The capture efficiency of P-5 was determined to be 72.3%. The press operated in a normal manner and the test results would represent typical capture efficiency. We believe we demonstrated 70% or greater capture efficiency and have meet the requirement of the construction permit.

APPENDIX

****EPA METHOD 24 WORKSHEET (% VOC BY WEIGHT)****

ASTM D 2369 - 81

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0992	0.1325	0.1200	37.54
white(02874)	2.	0.0982	0.1344	0.1206	38.12
	3.	0.0988	0.1302	0.1183	37.90
				avg %VOC=	37.85
				std dev=	0.24

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0984	0.1326	0.1126	58.48
red(02873)	2.	0.0974	0.1326	0.1118	59.09
	3.	0.0975	0.1314	0.1120	57.23
				avg %VOC=	58.27
				std dev=	0.78

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0978	0.1249	0.1062	69.00
blue(02872)	2.	0.0978	0.1411	0.1106	70.44
	3.	0.0979	0.1357	0.1097	68.78
				avg %VOC=	69.41
				std dev=	0.73

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0984	0.1326	0.1171	45.32
white(02881)	2.	0.0985	0.1357	0.1188	45.43
	3.	0.0984	0.1325	0.1169	45.75
				avg %VOC=	45.50
				std dev=	0.18

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0979	0.1352	0.1119	62.47
red(02892)	2.	0.0977	0.1307	0.1103	61.82
	3.	0.0980	0.1339	0.1117	61.84
				avg %VOC=	62.04
				std dev=	0.30

****EPA METHOD 24 WORKSHEET (% VOC BY WEIGHT)****

ASTM D 2369 - 81

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.1003	0.1366	0.1177	52.07
White ink in press	2.	0.0997	0.1308	0.1147	51.77
at end of test	3.	0.0993	0.1388	0.1182	52.15
				avg %VOC=	52.00
				std dev=	0.16

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0992	0.1332	0.1074	75.88
red ink in press	2.	0.0991	0.1258	0.1058	74.91
at end of test	3.	0.0993	0.1377	0.1089	75.00
				avg %VOC=	75.26
				std dev=	0.44

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0995	0.1325	0.1090	71.21
blue ink in press	2.	0.0990	0.1334	0.1090	70.93
at end of test	3.	0.0994	0.1383	0.1108	70.69
				avg %VOC=	70.95
				std dev=	0.21

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0978	0.1298	0.1159	43.44
white ink at	2.	0.0984	0.1413	0.1224	44.06
start of test	3.	0.0980	0.1348	0.1189	43.21
				avg %VOC=	43.57
				std dev=	0.36

Description		tare wt.	wet wt.	dry wt.	%VOC
	1.	0.0990	0.1296	0.1098	64.71
red ink at	2.	0.0990	0.1354	0.1119	64.56
start of test	3.	0.0988	0.1301	0.1099	64.54
				avg %VOC=	64.60
				std dev=	0.07

Description		tare wt.	wet wt.	dry wt.	%VOC
blue ink at	1.	0.0980	0.1321	0.1082	70.09
start of test	2.	0.0984	0.1342	0.1089	70.67
	3.	0.0990	0.1331	0.1092	70.09
				avg %VOC=	70.28
				std dev=	0.27

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

VOC DATA SHEET:

PROPERTIES OF THE COATING "AS SUPPLIED" BY THE MANUFACTURER

~~Coating~~ Ink Manufacturer: CS Inks

~~Coating~~ Ink Identification: FBB-14440 Prolam PC White

Batch Identification:

Supplied To: Arnold Cellophane

Properties of the coating as supplied[1] to the customer:

A. ~~Coating~~ Ink Density $(D_c)_s$: 12.0 lb/gal _____ kg/l

[x] ASTM D1475 [ ] Other[2]

B. Total Volatiles $(W_v)_s$: 31.8 Weight Percent

[ ] ASTM D2369 [x] Other[2]

C. Water Content: 1. $(W_w)_s$ ≤.50 Weight Percent

[ ] ASTM D3792 [ ] ASTM D4017 [x] Other[2]

2. $(V_w)_s$ .06 Volume Percent

[ ] Calculated [ ] Other[2]

D. Organic Volatiles $(W_o)_s$: 31.8 Weight Percent

E. Nonvolatiles Content $(V_n)_s$: 45 Volume Percent

F. VOC Content $(VOC)_s$: 1. 11.94 lb/gal coating less water

or _____ kg/l coating less water

2. 18.1 lb/gal solids

or _____ kg/l solids

Remarks: (use reverse side)

---

[1]The subscript "s" denotes each value is for the coating "as supplied" by the manufacturer.

[2]Explain the other method used under "Remarks".

Signed: D. L. Dunton Date 6/26/8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

VOC DATA SHEET:

PROPERTIES OF THE COATING "AS SUPPLIED" BY THE MANUFACTURER

~~Coating~~ Ink Manufacturer: CZ Inks

~~Coating~~ Ink Identification: FRB-14568 Prolam PC Cheetos 102 Blue

Batch Identification:

Supplied To: Arnold Cellophane

Properties of the coating as supplied[1] to the customer:

A. ~~Coating~~ Ink Density $(D_c)_s$: 8.0 lb/gal _____ kg/l

[x] ASTM D1475 [ ] Other[2]

B. Total Volatiles $(W_v)_s$: 62.8 Weight Percent

[ ] ASTM D2369 [x] Other[2]

C. Water Content: 1. $(W_w)_s$ ≤.50 Weight Percent

[ ] ASTM D3792 [ ] ASTM D4017 [x] Other[2]

2. $(V_w)_s$ .04 Volume Percent

[ ] Calculated [ ] Other[2]

D. Organic Volatiles $(W_o)_s$: 62.8 Weight Percent

E. Nonvolatiles Content $(V_n)_s$: 28.0 Volume Percent

F. VOC Content $(VOC)_s$: 1. 7.96 lb/gal coating less water

or _____ kg/l coating less water

2. 10.6 lb/gal solids

or _____ kg/l solids

Remarks: (use reverse side)

[1]The subscript "s" denotes each value is for the coating "as supplied" by the manufacturer.

[2]Explain the other method used under "Remarks".

Signed: R L Stricker Date 6/26/85

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

VOC DATA SHEET:

PROPERTIES OF THE COATING "AS SUPPLIED" BY THE MANUFACTURER

~~Coating~~ Ink Manufacturer: CZ Inks

~~Coating~~ Ink Identification: FBB-14513 Prolam PC Cheetos 735 Red

Batch Identification: _____

Supplied To: Arnold Cellophane

Properties of the coating as supplied to the customer:

A. ~~Coating~~ Ink Density $(D_C)_S$: 8.1 lb/gal _____ kg/l

[x] ASTM D1475 [ ] Other[2]

B. Total Volatiles $(W_V)_S$: 61.46 Weight Percent

[ ] ASTM D2369 [x] Other[2]

C. Water Content: 1. $(W_W)_S$ <.50 Weight Percent

[ ] ASTM D3792 [ ] ASTM D4017 [x] Other[2]

2. $(V_W)_S$ <.04 Volume Percent

[ ] Calculated [ ] Other[2]

D. Organic Volatiles $(W_O)_S$: 61.46 Weight Percent

E. Nonvolatiles Content $(V_n)_S$: 29.0 Volume Percent

F. VOC Content $(VOC)_S$: 1. 8.06 lb/gal coating less water

or _____ kg/l coating less water

2. 10.8 lb/gal solids

or _____ kg/l solids

Remarks: (use reverse side)

[1]The subscript "s" denotes each value is for the coating "as supplied" by the manufacturer.

[2]Explain the other method used under "Remarks".

Signed: S. L. Dierker Date 6/26/85

****MATERIAL BALANCE FOR CAPTURE EFFICIENCY STUDY****

material description	net wt.	%VOC	lbs VOC
white at start	199	43.57%	86.7
red at start	16	64.60%	10.3
blue at start	22	70.28%	15.5
41SN	12	100.00%	12.0
41SN	38	100.00%	38.0
41SN	15	100.00%	15.0
41PN	38	100.00%	38.0
41PN	38	100.00%	38.0
41PN	38	100.00%	38.0
red ink	330	58.23%	192.2
blue ink	202	69.41%	140.2
white ink	463	37.85%	175.2
41PN	27	100.00%	27.0
41SN	27	100.00%	27.0
41PN	27	100.00%	27.0
41PN	27	100.00%	27.0
41PN	27	100.00%	27.0
41SN	27	100.00%	27.0
white ink	296	45.50%	134.7
41SN	27	100.00%	27.0
41PN	27	100.00%	27.0
41PN	27	100.00%	27.0
41PN	27	100.00%	27.0
41PN	34	100.00%	34.0
41PN	22	100.00%	22.0
41PN	19	100.00%	19.0
41PN	20	100.00%	20.0
41PN	21	100.00%	21.0
41PN	10	100.00%	10.0
white at end of test	-186	52.00%	-96.7
red at end of test	-92	75.26%	-69.2
blue at end of test	-39	70.95%	-27.7
		totat lbs VOC =	1136

****LOG OF GC TEST AND PRESS STATUS****

entry time	interval minutes	press ft/min	blower 1 = on	HP RUN #	AMT CAL#1	AMT CAL#2	AMT CAL#3	AMT CAL#4	interval lbs VOC
17:00	0	400	1	0	0.000	0	0.000	0.000	0.00
17:40	40	400	1	7	0.185	NA	0.365	0.179	19.13
18:15	35	400	1	8	0.178	NA	0.360	0.178	16.44
18:55	40	400	1	9	0.286	36	0.518	0.304	29.07
19:07	12	0	1	17	0.190	NA	0.247	0.127	4.44
19:18	11	400	1	9	0.286	36	0.518	0.304	8.00
19:20	2	0	1	17	0.190	NA	0.247	0.127	0.74
20:00	40	400	1	9	0.286	36	0.518	0.304	29.07
20:15	15	400	1	10	0.290	NA	0.520	0.331	11.23
20:50	35	400	1	11	0.284	NA	0.491	0.339	25.58
21:37	47	400	1	12	0.216	NA	0.347	0.297	26.52
22:10	33	400	1	13	0.281	43	0.479	0.359	24.22
22:33	23	400	1	14	0.301	NA	0.488	0.395	17.86
23:02	29	400	1	15	0.325	NA	0.496	0.417	23.55
23:34	32	400	1	16	0.247	NA	0.384	0.379	21.20
24:01	27	0	1	17	0.190	NA	0.247	0.127	9.99
24:10	9	400	1	16	0.247	NA	0.384	0.379	5.96
24:32	22	400	1	18	0.237	42	0.396	0.334	13.96
1:01	29	400	1	19	0.370	40	0.551	0.467	26.41
1:33	32	400	1	20	0.250	NA	0.270	0.200	15.11
1:48	15	400	1	20	0.250	NA	0.270	0.200	7.08
2:07	19	400	1	21	0.192	47	0.283	0.342	10.18
2:34	27	400	1	22	0.194	44	0.305	0.362	15.25
2:40	6	400	1	22	0.194	44	0.305	0.362	3.39
3:07	27	400	1	23	0.189	45	0.312	0.356	15.18
3:43	36	0	1	17	0.190	NA	0.247	0.127	13.32
3:50	7	400	1	23	0.189	45	0.312	0.356	3.94
3:55	5	400	1	24	0.178	44	0.312	0.347	2.75
4:05	10	400	1	25	0.175	NA	0.292	0.330	5.23
4:39	34	400	1	26	0.174	NA	0.291	0.327	17.66
5:07	30	400	1	27	0.152	NA	0.254	0.293	13.76
5:38	29	400	1	28	0.181	NA	0.341	0.295	15.54
6:05	27	400	1	29	0.184	45	0.365	0.315	15.30
6:40	35	400	1	30	0.198	42	0.389	0.332	21.10
7:09	29	400	1	31	0.170	46	0.322	0.299	15.04
7:40	31	400	1	32	0.179	NA	0.337	0.303	16.66
8:10	30	400	1	33	0.184	NA	0.371	0.271	16.26
8.40	30	400	1	34	0.177	46	0.371	0.265	16.00
9:09	29	400	1	35	0.167	NA	0.330	0.258	14.36
9:39	30	400	1	36	0.189	46	0.375	0.304	17.08
10:10	39	400	1	37	0.185	48	0.322	0.292	20.44
10:34	16	400	1	38	0.193	45	0.361	0.300	8.96
11:15	41	400	1	39	0.176	42	0.295	0.306	20.90
11:47	32	400	1	40	0.178	42	0.296	0.333	16.94
12:15	28	400	1	41	0.196	43	0.344	0.347	16.29
12:45	30	0	1	42	0.064	43	0.082	0.073	4.31
13:20	35	400	1	43	0.184	39	0.326	0.338	19.47
13:42	22	500	1	44	0.223	43	0.381	0.410	14.63
14:15	33	500	1	45	0.219	46	0.347	0.432	21.60
14:45	30	500	1	46	0.241	44	0.375	0.519	22.34
15:19	34	500	1	47	0.251	43	0.464	0.430	25.54
15:50	31	500	1	48	0.253	44	0.467	0.416	23.10
16:30	40	500	1	49	0.189	46	0.292	0.407	23.30
							Lbs. VOC captured =		821.39

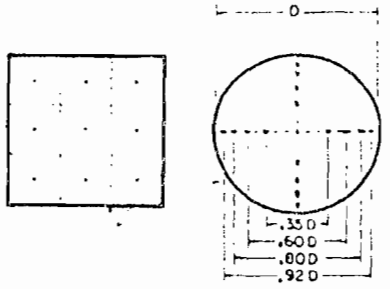
AIR VELOCITIES WITH THE DWYER PITOT TUBE

AIR VELOCITY

The total pressure of an air stream flowing in a duct is the sum of the static or bursting pressure exerted upon the sidewalls of the duct and the impact or velocity pressure of the moving air. Through the use of a pitot tube connected differentially to a manometer, the velocity pressure alone is indicated and the corresponding air velocity determined.

For accuracy of plus or minus 2%, as in laboratory applications, extreme care is required and the following precautions should be observed:

1. Duct diameter 4" or greater.
2. Make an accurate traverse per sketch at right and average the readings.
3. Provide smooth, straight duct sections 10 diameters in length both upstream and downstream from the pitot tube.
4. Provide an egg crate type straightener upstream from the pitot tube.



In making an air velocity check select a location as suggested above, connect tubing leads from both pitot tube connections to the manometer and insert in the duct with the tip directed into the air stream. If the manometer shows a minus indication reverse the tubes. With a direct reading manometer, air velocities will now be shown in feet per minute. In other types, the manometer will read velocity pressure in inches of water and the corresponding velocity will be found from the curves in this bulletin. If circumstances do not permit an accurate traverse, center the pitot tube in the duct, determine the center velocity and multiply by a factor of .9 for the approximate average velocity. Field tests run in this manner should be accurate within plus or minus 5%.

The velocity indicated is for dry air at 70°F., 29.9" Barometric Pressure and a resulting density of .075#/cu. ft. For air at a temperature other than 70°F. refer to the curves in this bulletin. For other variations from these conditions, corrections may be based upon the following data:

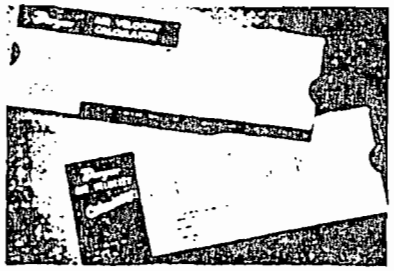
$$\text{Air Velocity} = 1096.2 \sqrt{\frac{Pv}{D}}$$

where Pv = velocity pressure in inches of water
D = Air density in #/cu. ft.

$$\text{Air Density} = 1.325 \times \frac{P_B}{T}$$

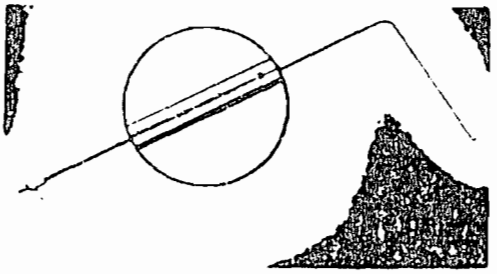
where P_B = Barometric Pressure in inches of mercury
T = Absolute Temperature (indicated temperature °F plus 460)

Flow in cu. ft. per min. = Duct area in square feet x air velocity in ft. per min.



AIR VELOCITY CALCULATOR

Computes velocity based on air density corrected for conditions of temperature and pressure. Eliminates tedious calculations. Ranges from .01 to 10" water corresponding to 400 to 20,000 FPM. Furnished with each pitot tube.



STAINLESS STE
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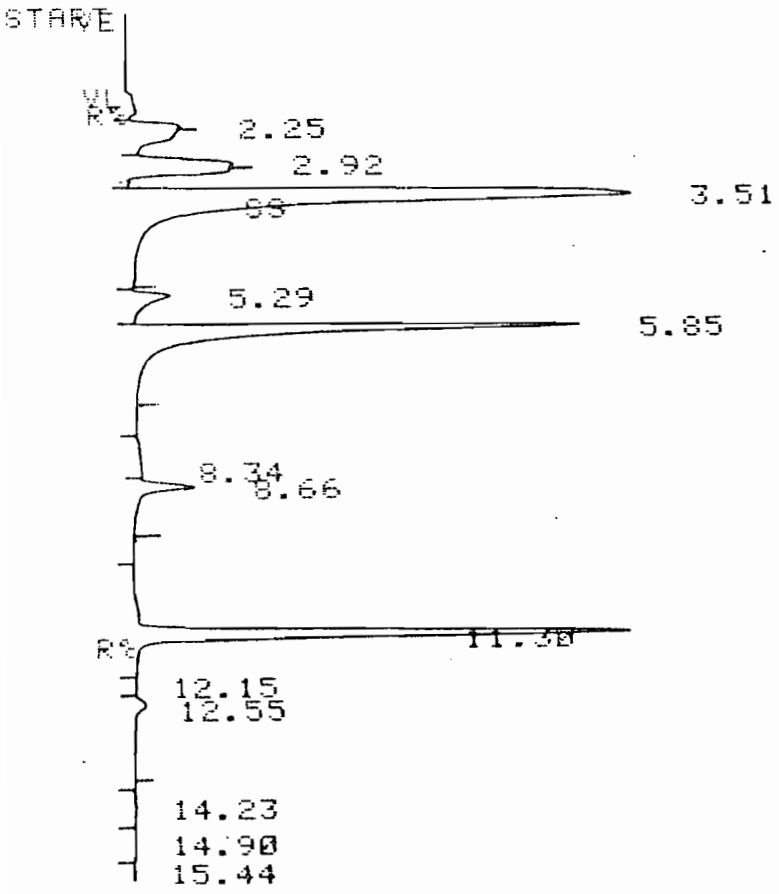
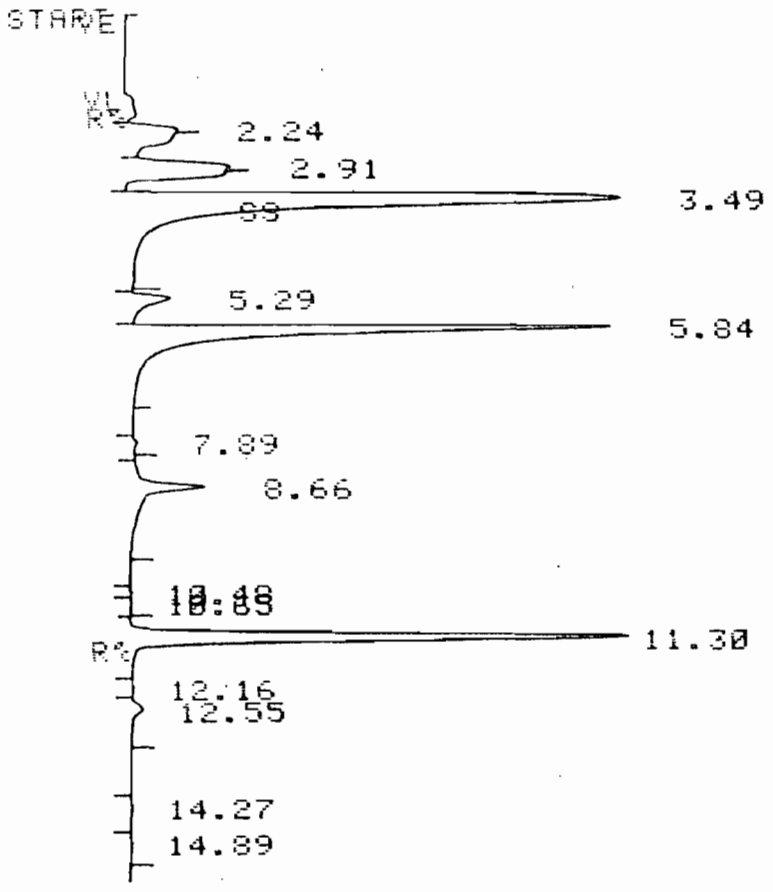


HP RUN # 7 JUL/02/85 TIME 17:40:54
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.92	2.93	7316	2	5.360
3.51	3.45	255400	3	0.365
5.85	5.80	141600	4	0.179
11.30	11.33	134700	(R) 1	0.185

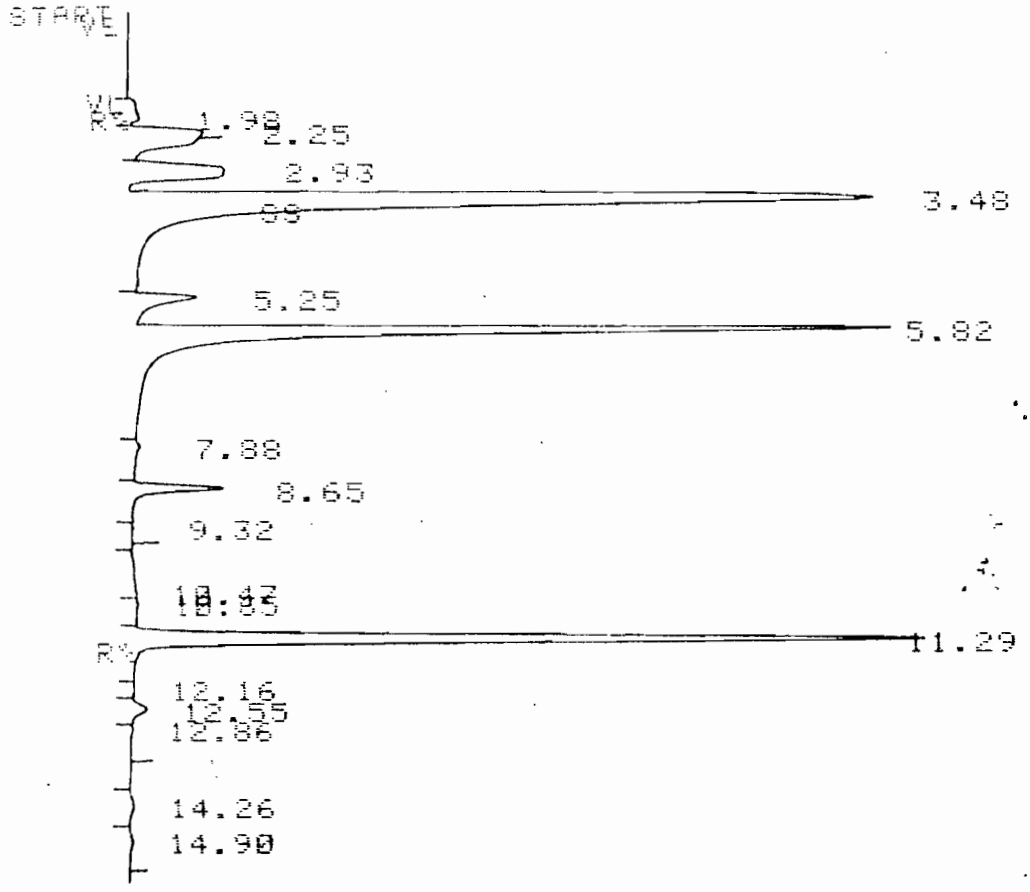
DIL FACTOR: 1.0000 E+ 0



HP RUN # 8 JUL/02/85 TIME 18:18:36
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.91	2.93	7334	2	5.373
3.49	3.45	251700	3	0.360
5.84	5.80	153300	4	0.194
11.30	11.33	129300	(R) 1	0.178

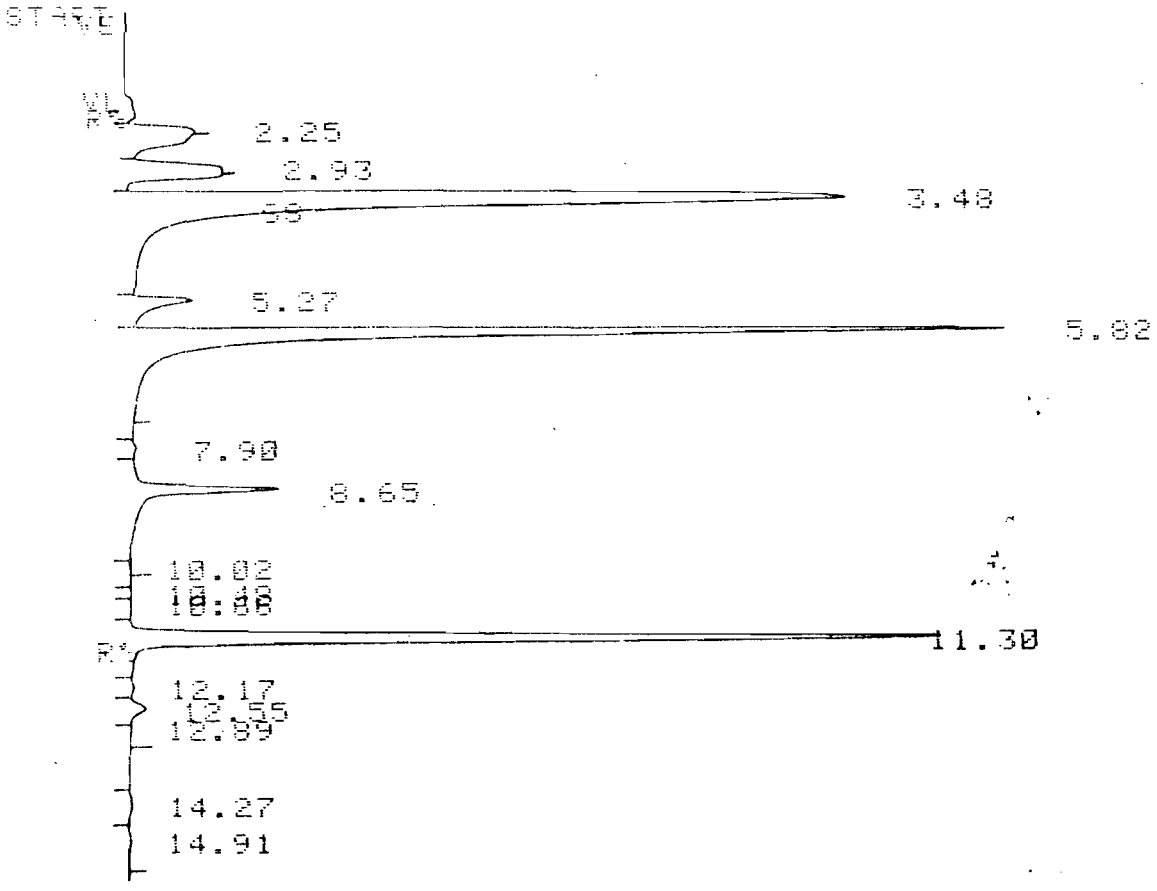
DIL FACTOR: 1.0000 E+ 0



HP RUN # 9 JUL/02/85 TIME 18:58:46
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.93	2.92	49090	2	35.964
3.48	3.44	362700	3	0.518
5.82	5.79	240000	4	0.304
11.29	11.33	207900	(R) 1	0.286

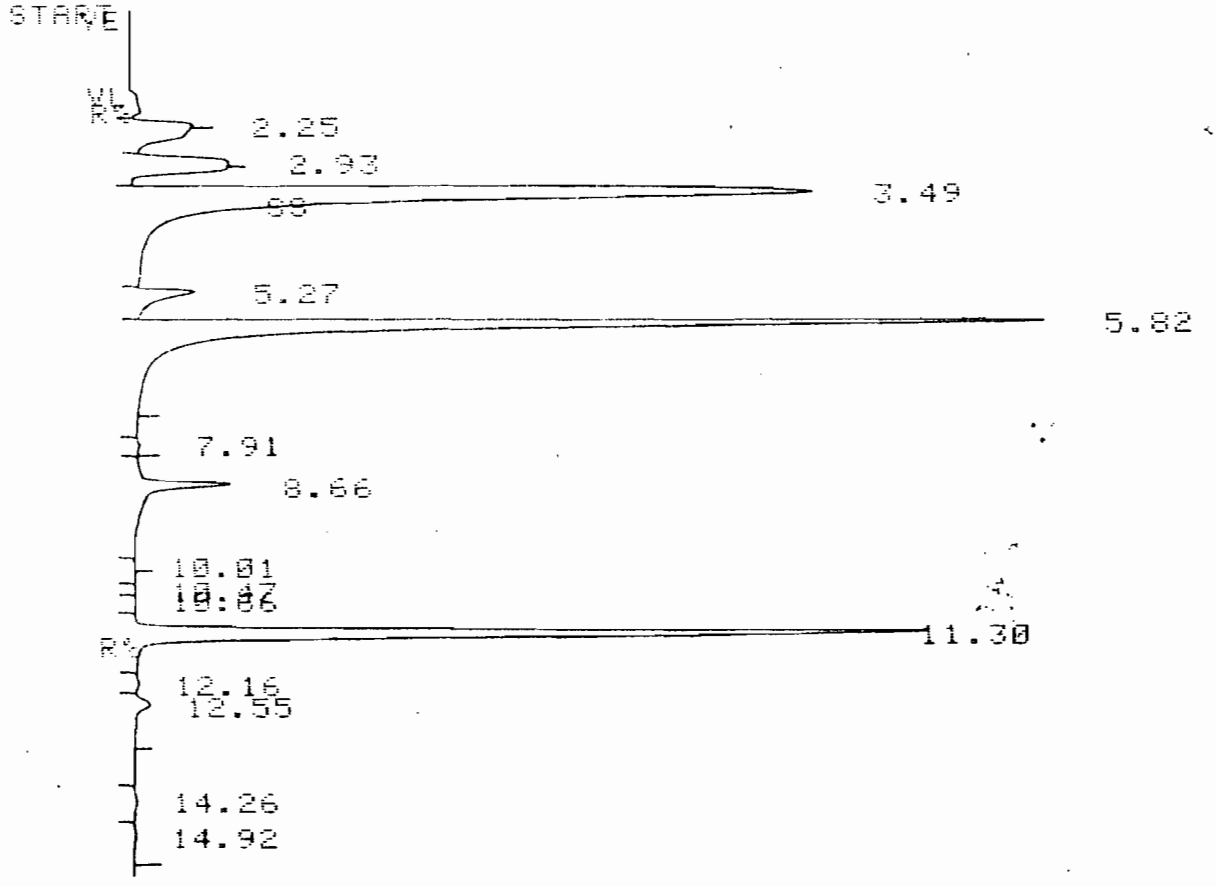
DIL FACTOR: 1.0000 E+ 0



HP RUN # 10 JUL/02/85 TIME 20:22:22
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.93	2.93	6876	2	5.037
3.48	3.45	363700	3	0.520
5.82	5.80	262000	4	0.331
11.30	11.33	210700	(R) 1	0.290

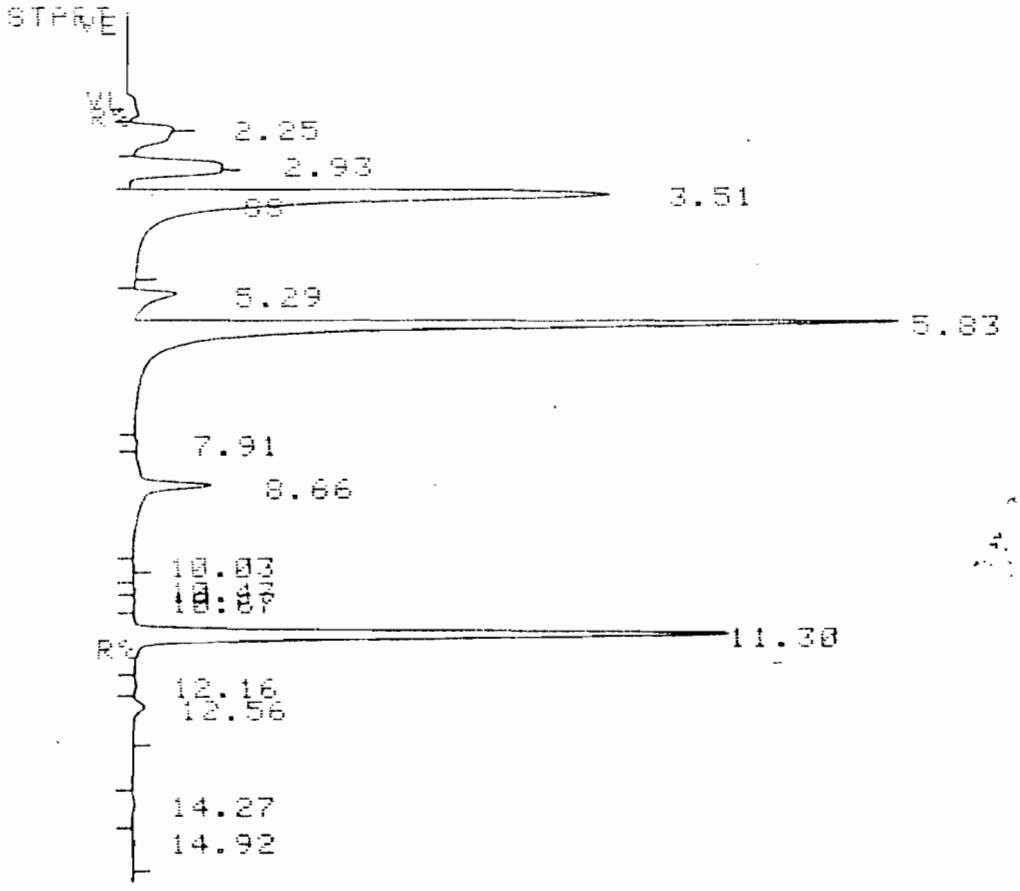
DIL FACTOR: 1.0000 E+ 0



HP RUN # 11 JUL/02/85 TIME 21:06:39
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.93	2.93	8348	2	6.116
3.49	3.45	343900	3	0.491
5.82	5.80	268200	4	0.339
11.30	11.33	206600	(R) 1	0.284

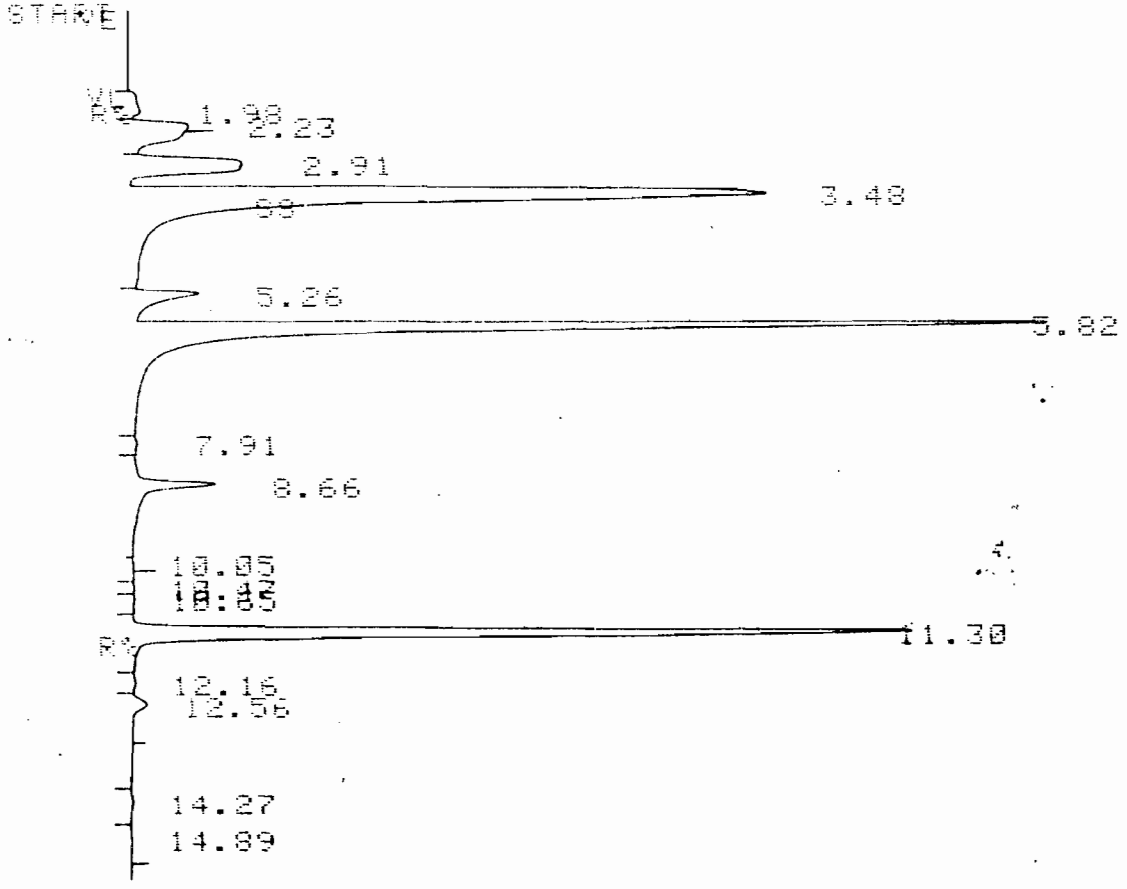
DIL FACTOR: 1.0000 E+ 0



HP RUN # 12 JUL/02/85 TIME 21:39:12
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.93	2.93	7994	2	5.856
3.51	3.45	243100	3	0.347
5.83	5.80	234700	4	0.297
11.30	11.33	156800	(R) 1	0.216

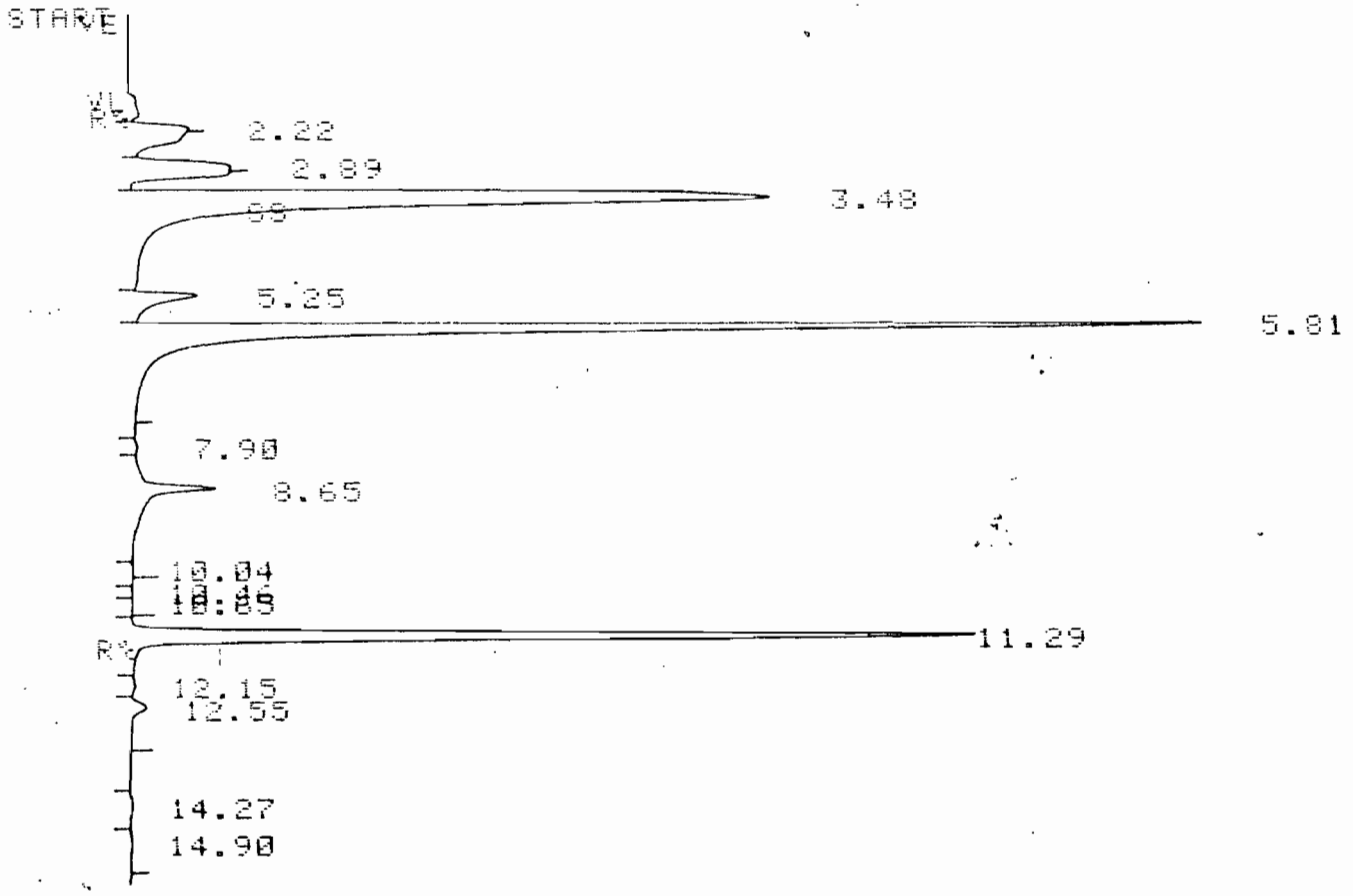
DIL FACTOR: 1.0000 E+ 0



HP PUH # 13 JUL/02/85 TIME 22:09:49
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.91	2.93	58670	2	42.982
3.48	3.45	335200	3	0.479
5.82	5.80	283800	4	0.359
11.30	11.33	204600	(R) 1	0.282

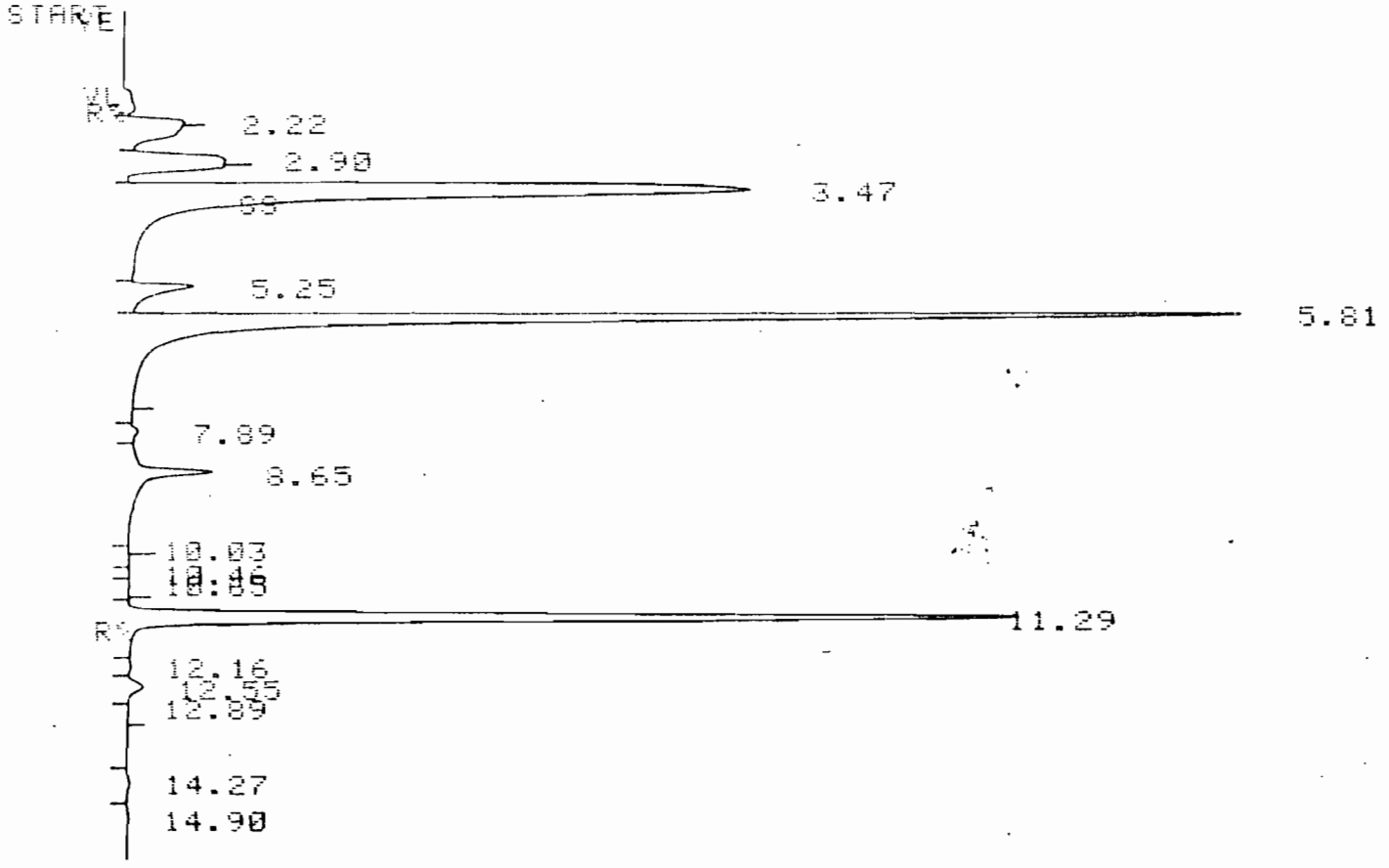
; DIL FACTOR: 1.0000 E+ 0



HP RUN # 14 JUL/02/85 TIME 22:40:01
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.92	8384	2	6.142
3.48	3.44	341500	3	0.488
5.81	5.79	312100	4	0.395
11.29	11.33	218500	(R) 1	0.301

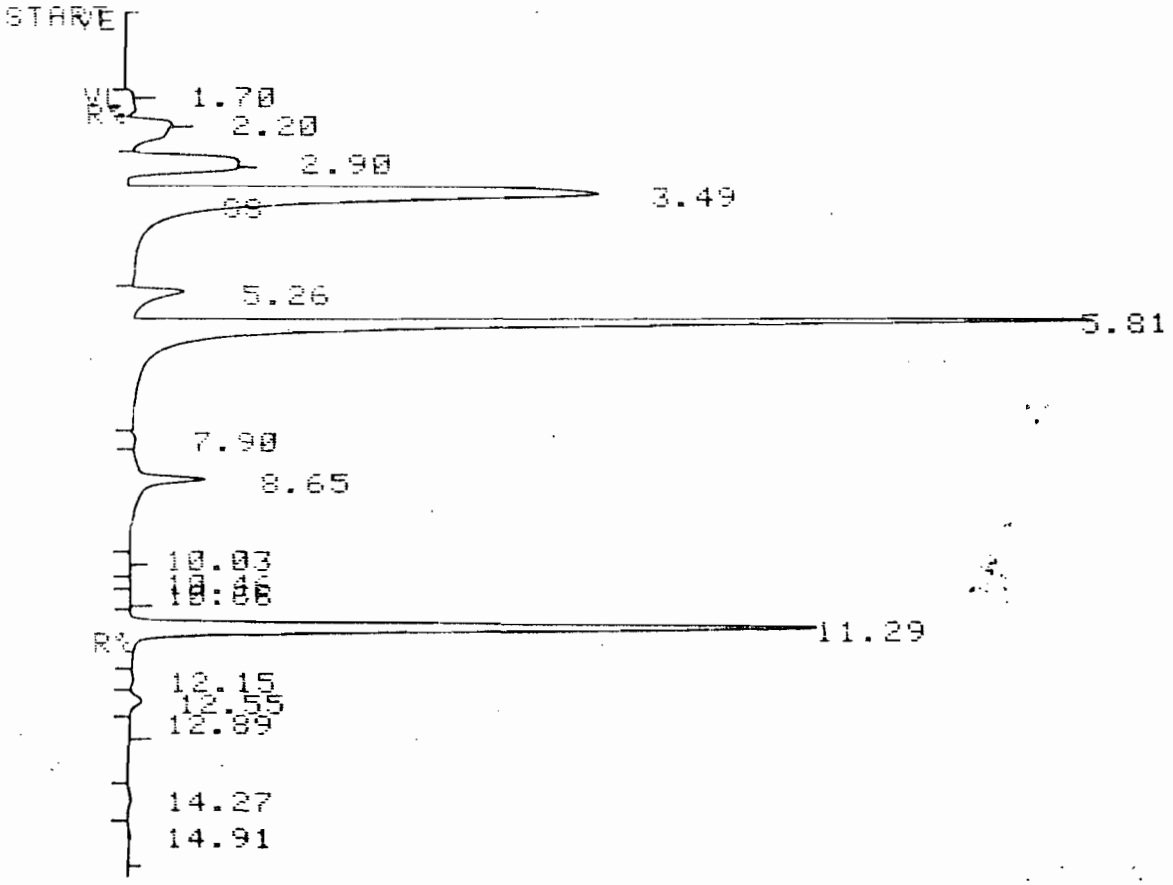
DIL FACTOR: 1.0000 E+ 0



HP RUN # 15 JUL/02/85 TIME 23:09:57
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.92	9490	2	6.952
3.47	3.44	347500	3	0.496
5.81	5.79	329900	4	0.417
11.29	11.33	235900	(R) 1	0.335

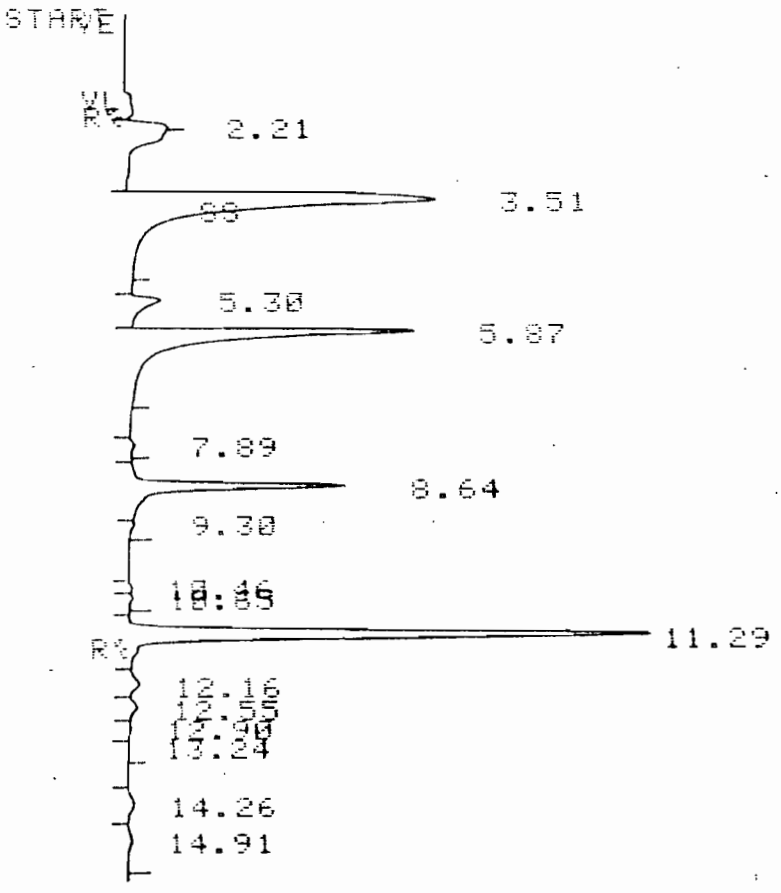
DIL FACTOR: 1.0000 E+ 0



HP RUN # 16 JUL/02/85 TIME 23:39:51
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.92	8804	2	6.450
3.49	3.44	269000	3	0.384
5.81	5.79	299900	4	0.379
11.29	11.33	179400	(R) 1	0.247

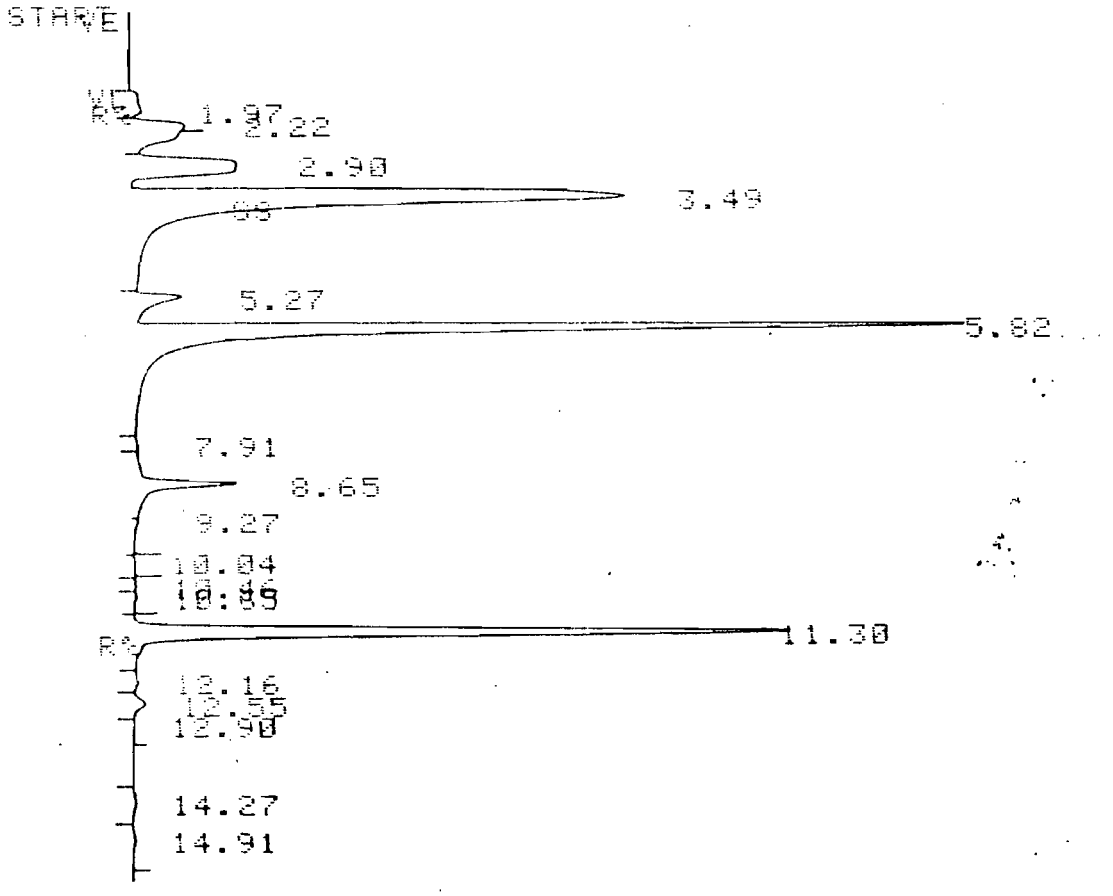
DIL FACTOR: 1.0000 E+ 0



HP RUN # 17 JUL/03/85 TIME 00:09:40
ESTD

RT	EXP RT	AREA	CAL #	AMT
3.51	3.44	173200	3	0.247
5.87	5.79	100400	4	0.127
11.29	11.33	137900	(R) 1	0.190

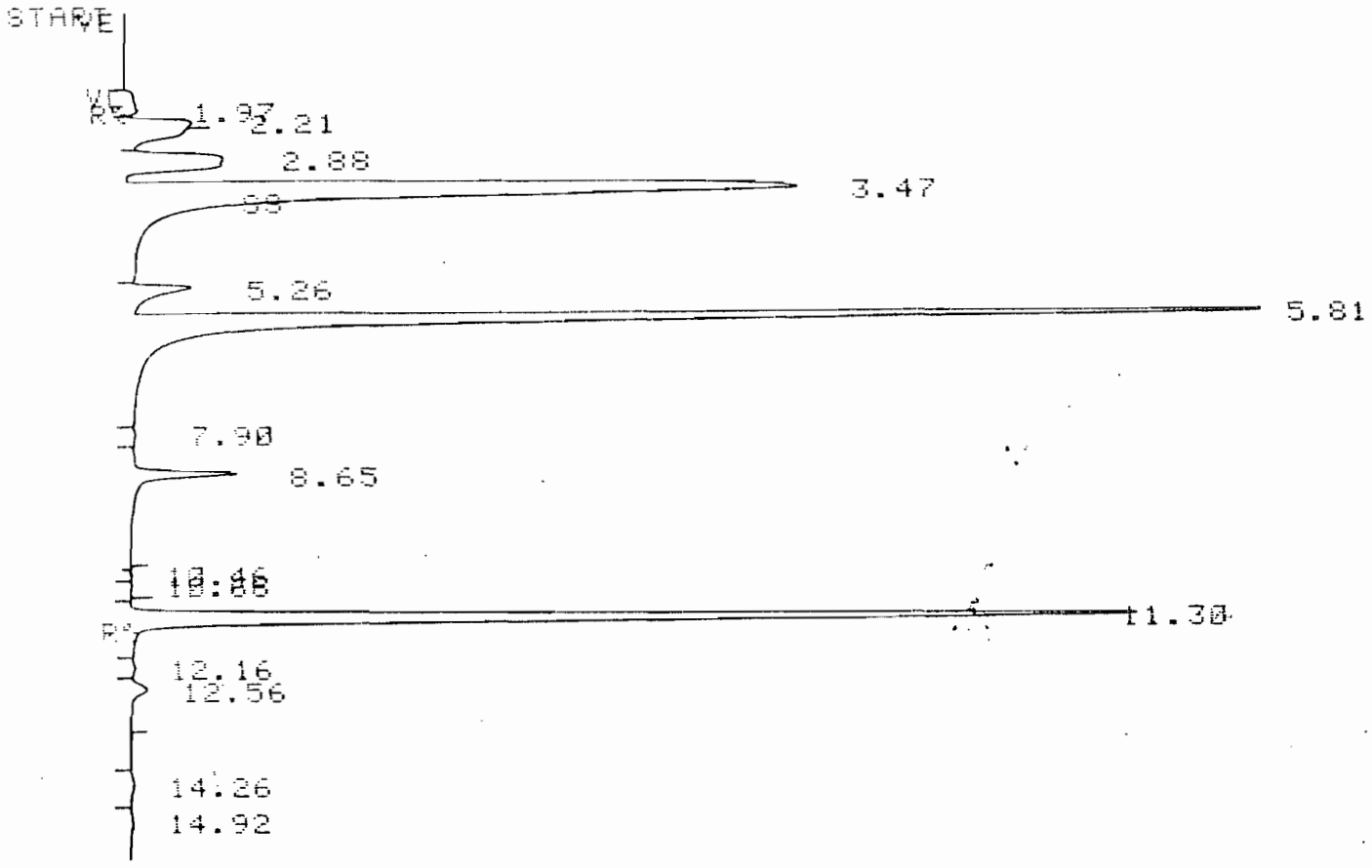
DIL FACTOR: 1.0000 E+ 0



HP RUN # 18 JUL/03/85 TIME 00:39:26
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	57920	2	42.433
3.49	3.45	277100	3	0.396
5.82	5.80	263800	4	0.334
11.30	11.33	172000	(R) 1	0.237

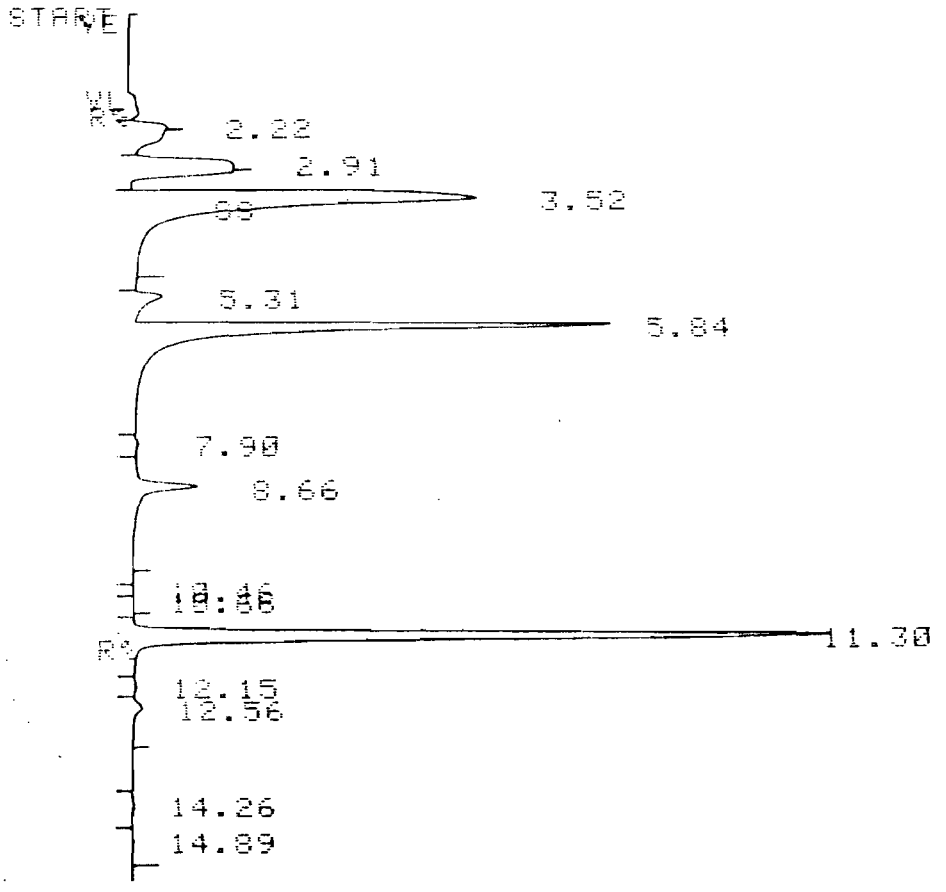
DIL FACTOR: 1.0000 E+ 0



HP RUN # 19 JUL/03/85 TIME 01:09:21
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.88	2.93	54770	2	40.125
3.47	3.45	385400	3	0.551
5.81	5.80	369200	4	0.467
11.30	11.33	268900	(R) 1	0.370

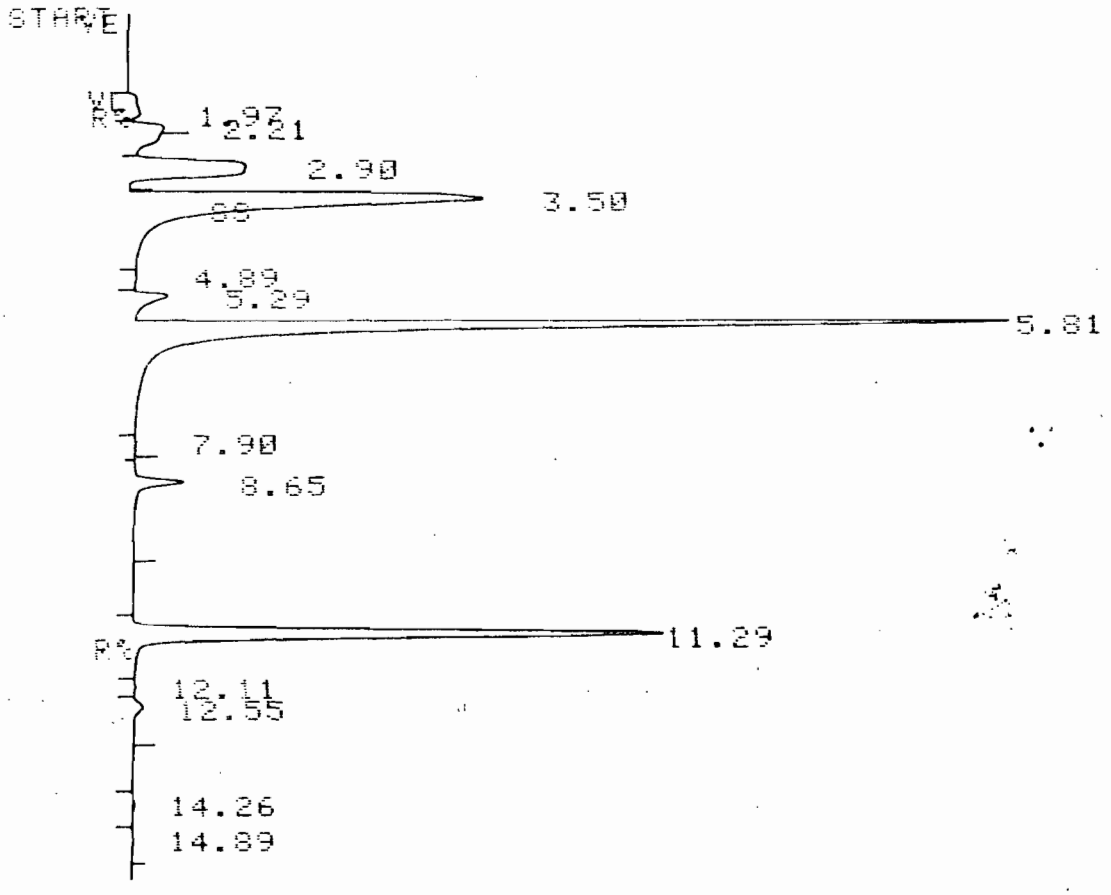
DIL FACTOR: 1.0000 E+ 0



HP RUN # 20 JUL/03/85 TIME 01:40:11
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.91	2.93	10190	2	7.465
3.52	3.45	188700	3	0.270
5.84	5.80	158400	4	0.200
11.30	11.33	181900	(R) 1	7.350

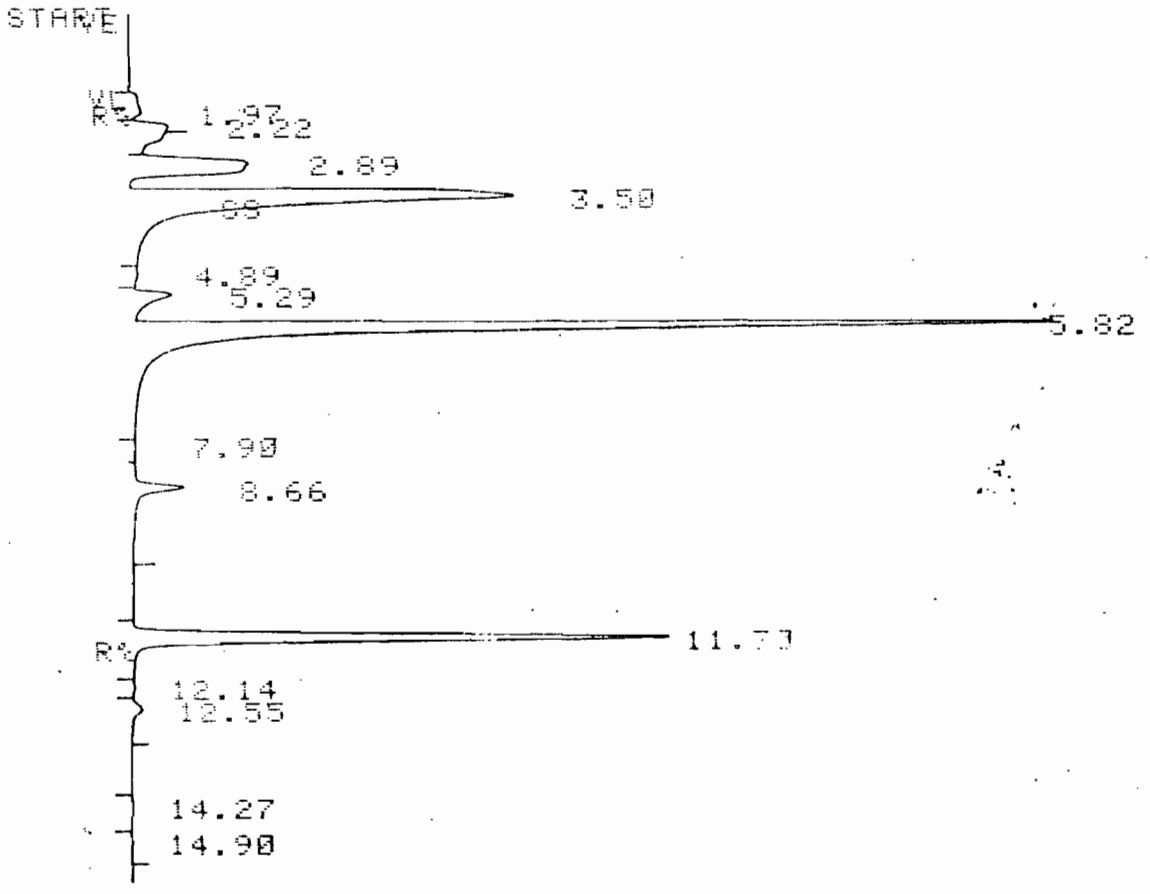
DIL FACTOR: 1.0000 E+ 0



HP RUN # 21 JUL/03/85 TIME 02:10:06
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.92	64160	2	47.004
3.50	3.44	198000	3	0.283
5.81	5.79	270200	4	0.342
11.29	11.33	139200	(R) 1	0.192

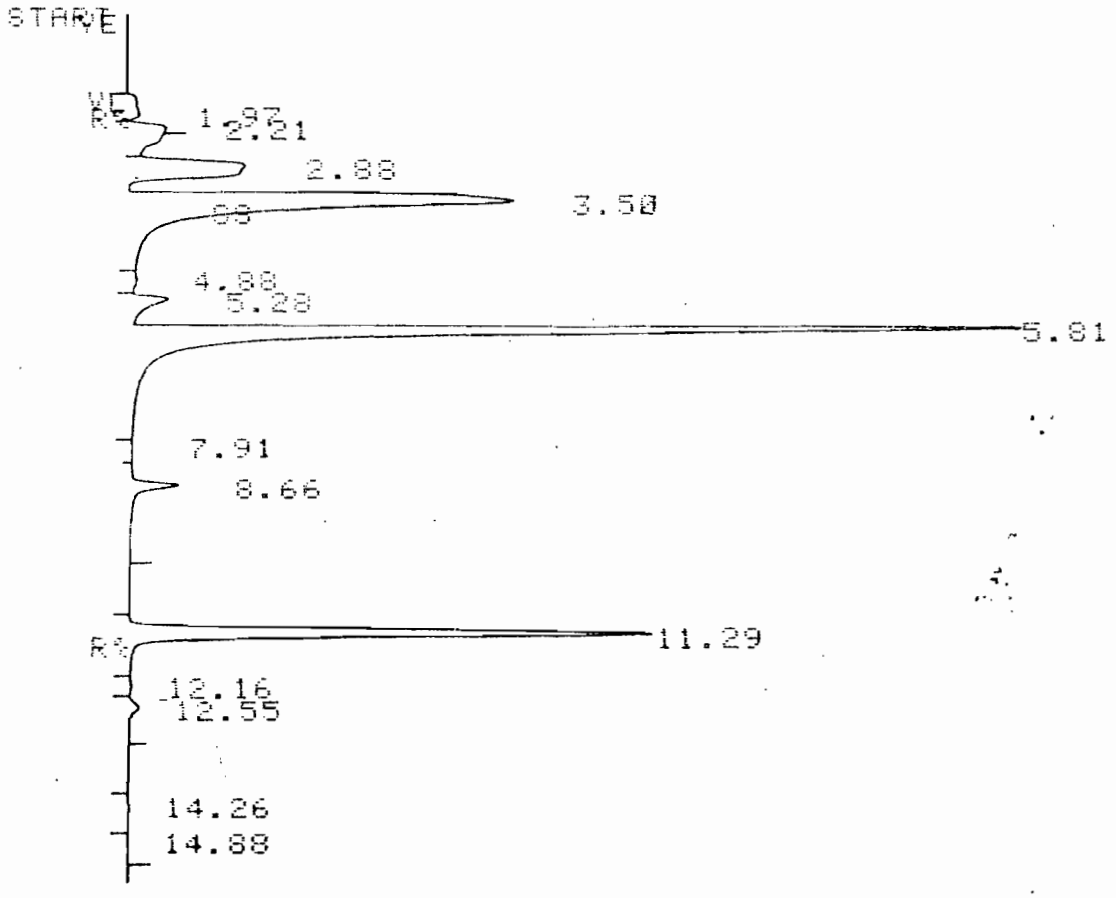
DIL FACTOR: 1.0000 E+ 0



HP RUN # 22 JUL/03/85 TIME 02:41:32
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.93	60770	2	44.521
3.50	3.45	213380	3	0.305
5.82	5.80	286000	4	0.362
11.30	11.33	141100	(R) 1	0.194

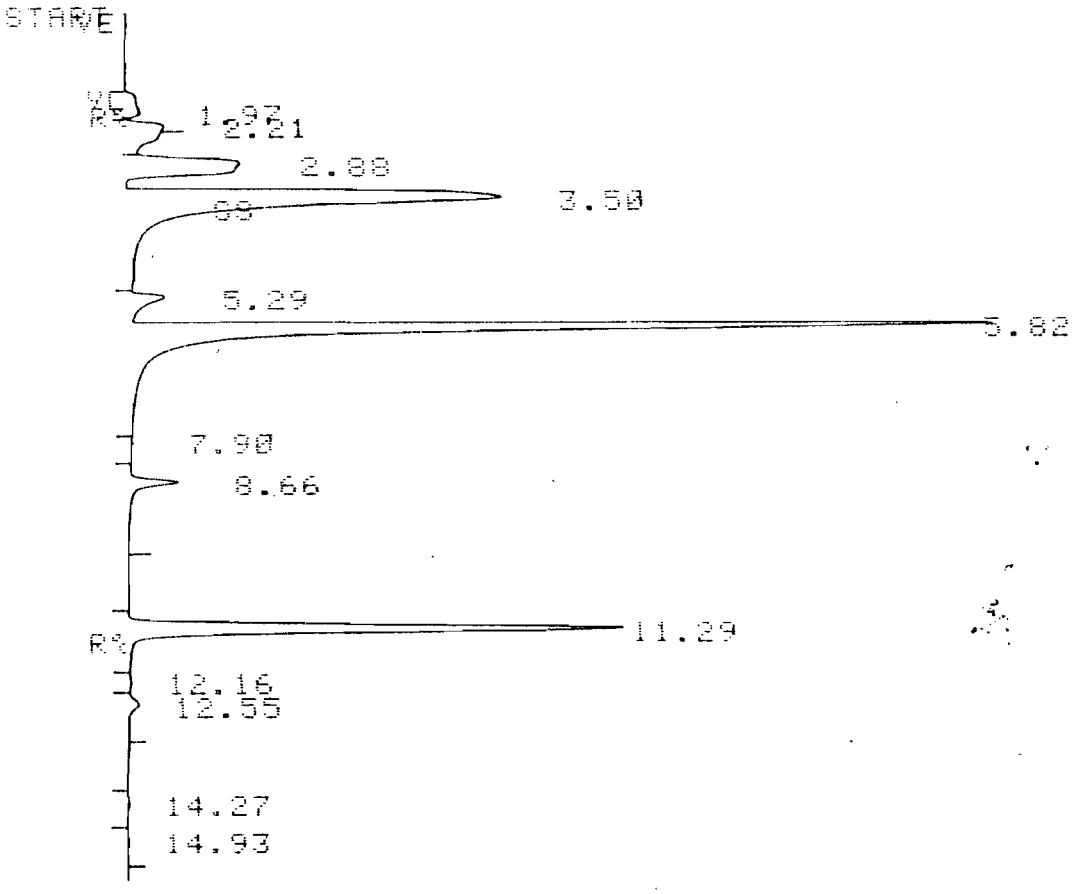
DIL FACTOR: 1.0000 E+ 0



HP RUN # 23 JUL/03/85 TIME 03:12:31
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.88	2.92	61910	2	45.356
3.50	3.44	218300	3	0.312
5.81	5.79	281500	4	0.356
11.29	11.33	137600	(R) 1	0.189

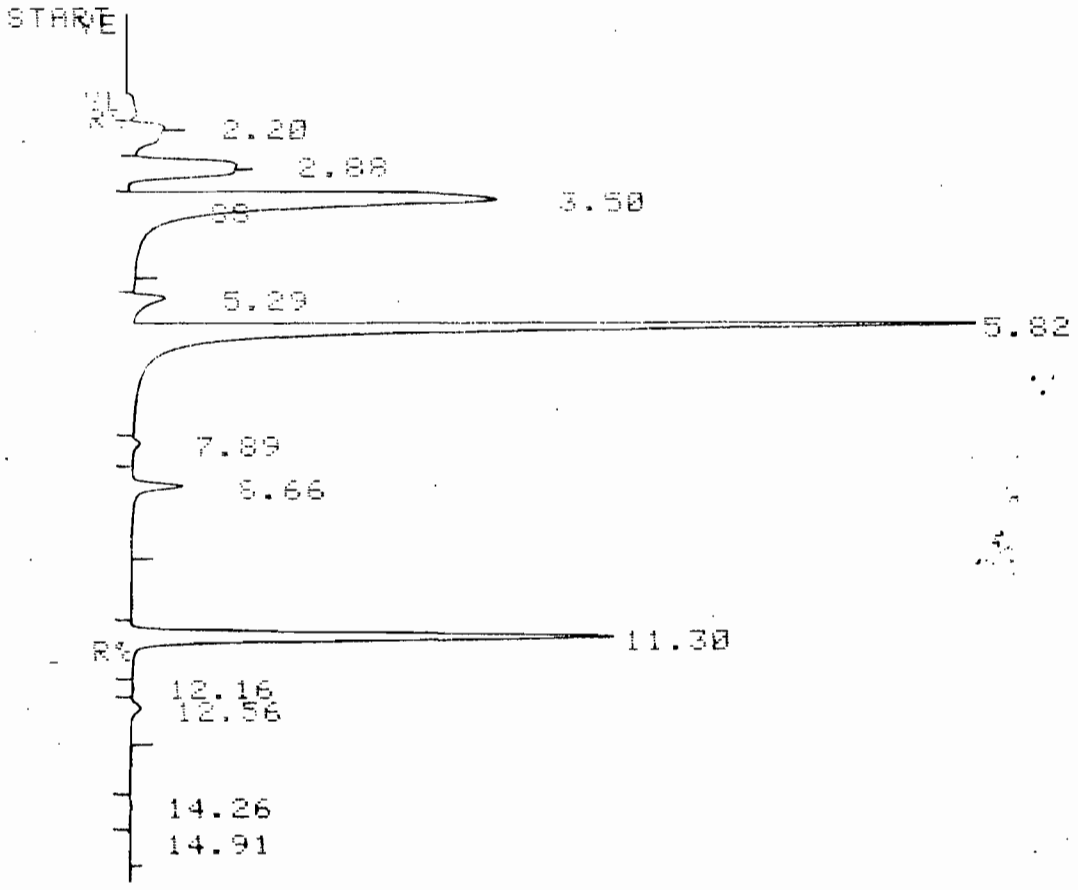
DIL FACTOR: 1.0000 E+ 0



HP RUN # 24 JUL/03/85 TIME 03:42:56
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.88	2.92	60370	2	44.228
3.50	3.44	218100	3	0.312
5.82	5.79	274100	4	0.347
11.29	11.33	129600	(R) 1	0.178

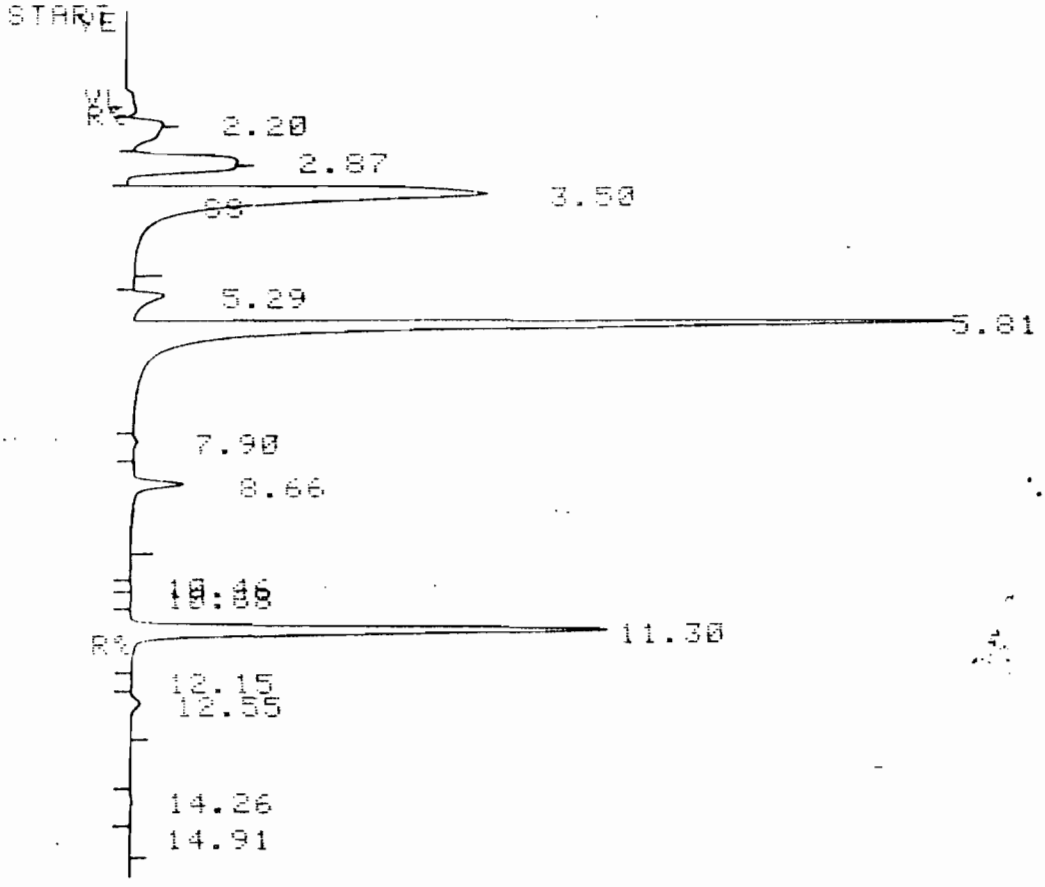
DIL FACTOR: 1.0000 E+ 0



HP RUN # 25 JUL/03/85 TIME 04:13:06
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.88	2.93	10050	2	7.363
3.50	3.45	204600	3	0.292
5.82	5.80	260900	4	0.330
11.30	11.33	126900	(R) 1	0.175

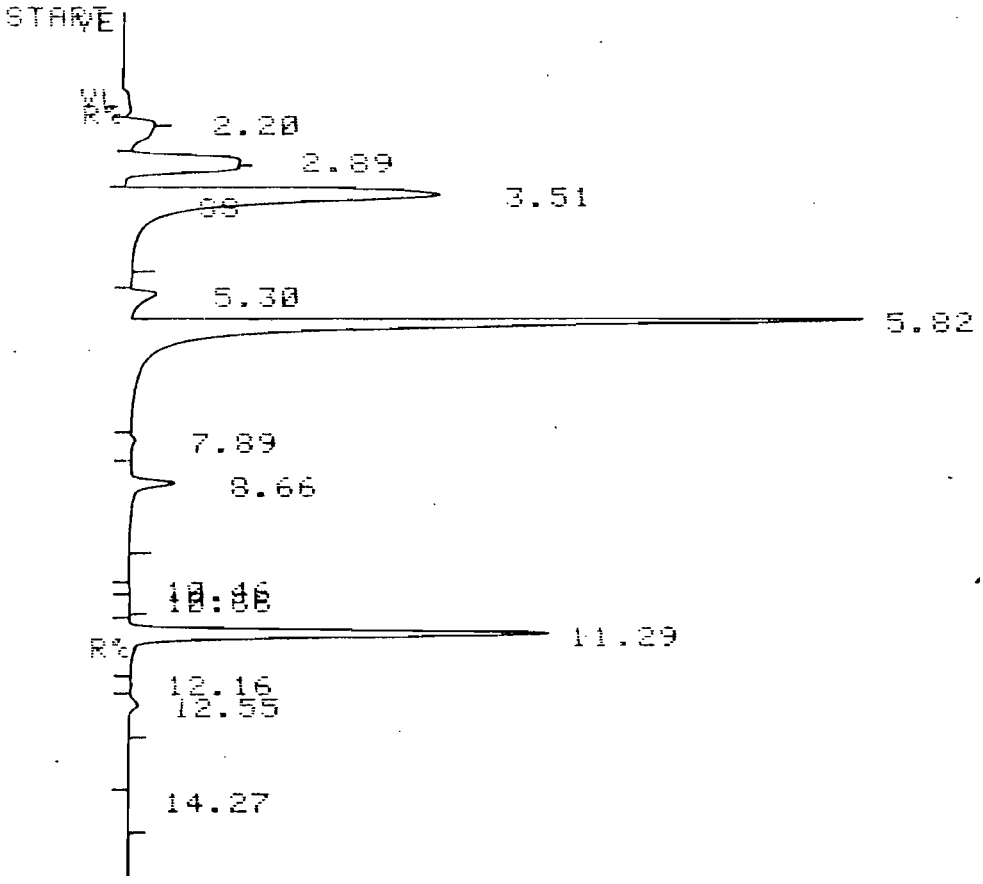
DIL FACTOR: 1.0000 E+ 0



HP RUN # 26 JUL/03/85 TIME 04:47:13
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.87	2.93	11300	2	8.278
3.50	3.45	203700	3	0.291
5.81	5.80	258700	4	0.327
11.30	11.33	126200	(R) 1	0.174

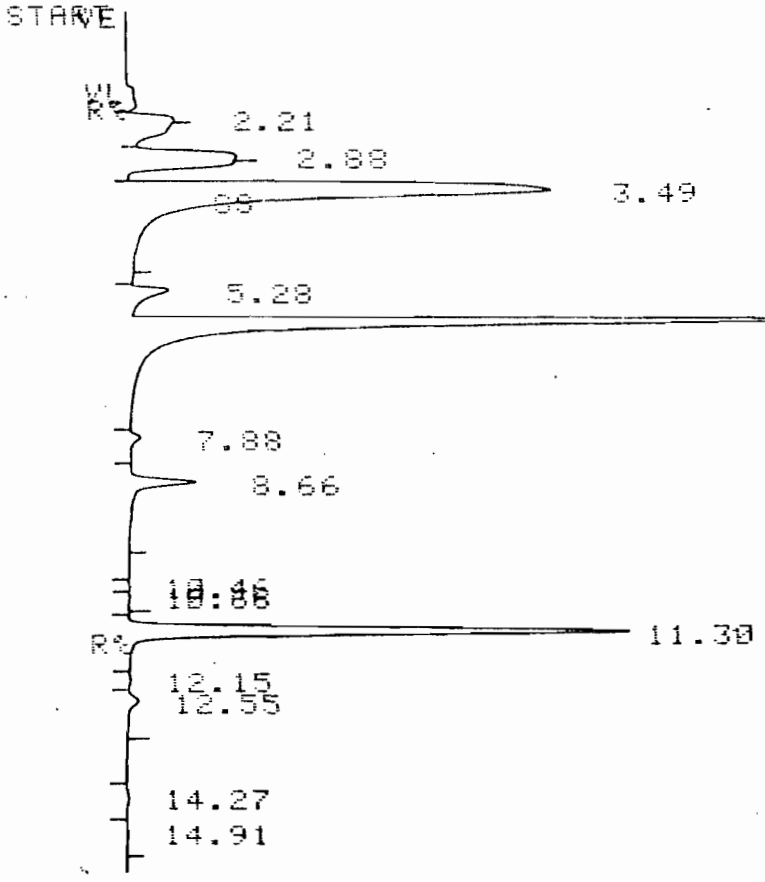
DIL FACTOR: 1.0000 E+ 0



HP RUN # 27 JUL/03/85 TIME 05:17:09
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.92	10860	2	7.956
3.51	3.44	177700	3	0.254
5.82	5.7[illegible]	231600	4	0.293
11.29	11.3[illegible]	110200	(R) 1	0.152

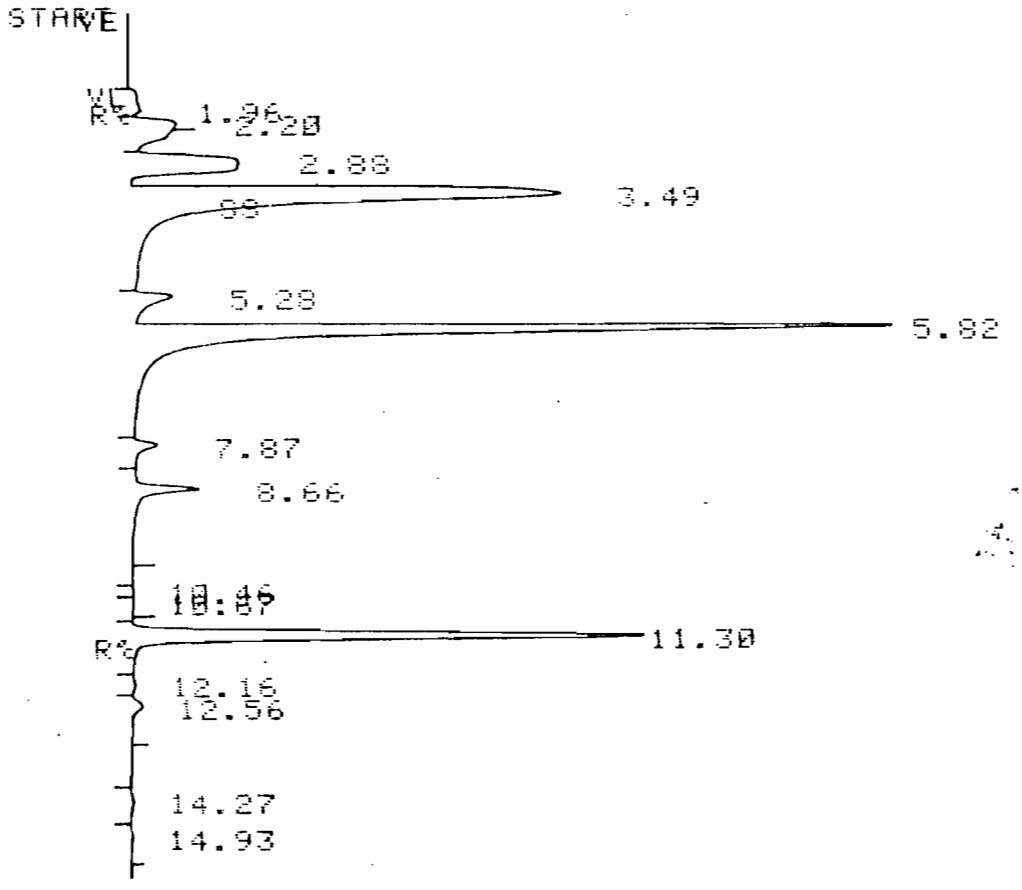
DIL FACTOR: 1.0000 E+ 0



HP RUN # 28 JUL/03/85 TIME 05:47:23
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.88	2.93	10320	2	7.561
3.49	3.45	238700	3	0.341
5.82	5.80	233000	4	0.295
11.30	11.33	131600	(R) 1	0.181

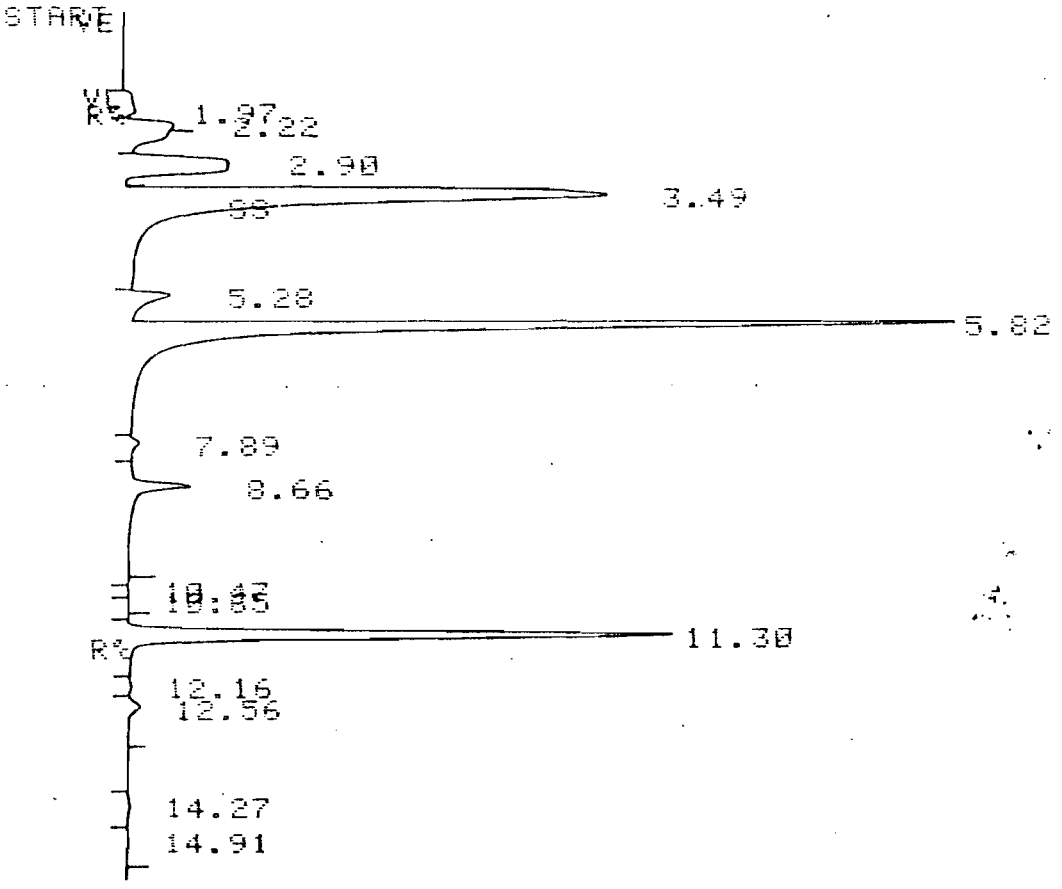
DIL FACTOR: 1.0000 E+ 0



HP RUN # 29 JUL/03/85 TIME 06:17:31
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.88	2.93	62180	2	45.554
3.49	3.45	255600	3	0.365
5.82	5.80	248700	4	0.315
11.30	11.33	133900	(R) 1	0.184

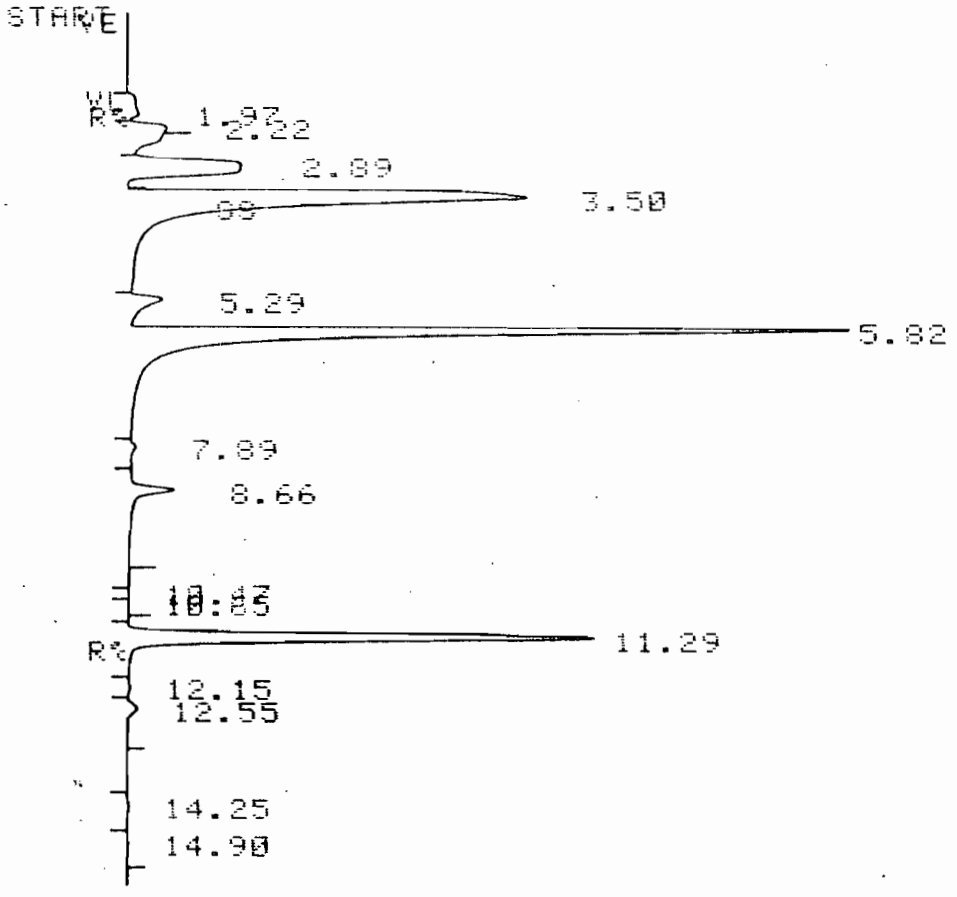
DIL FACTOR: 1.0000 E+ 0



HP RUN # 30 JUL/03/85 TIME 06:47:36
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	56860	2	41.656
3.49	3.45	272500	3	0.389
5.82	5.80	262800	4	0.332
11.30	11.33	144100	(R) 1	0.198

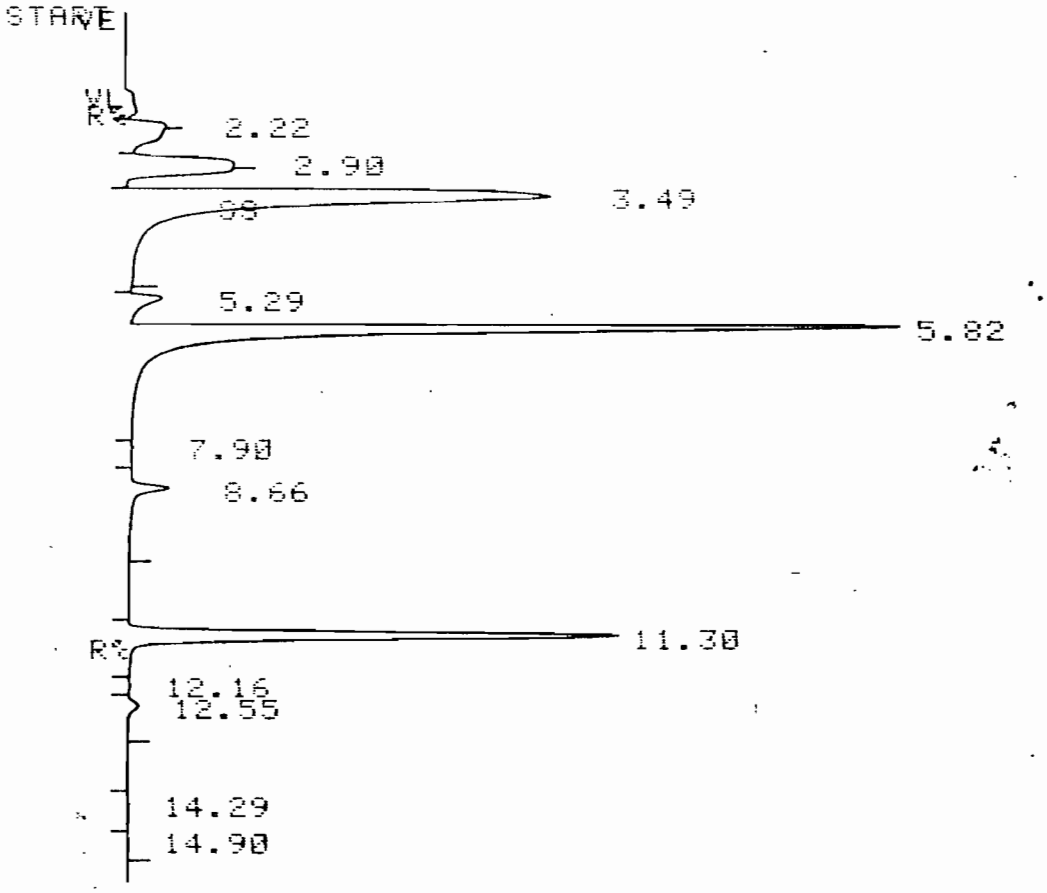
DIL FACTOR: 1.0000 E+ 0



HP RUN # 31 JUL/03/85 TIME 07:17:59
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.92	62420	2	45.730
3.50	3.44	225700	3	0.322
5.82	5.79	235200	4	0.298
11.29	11.33	123300	(R) 1	0.170

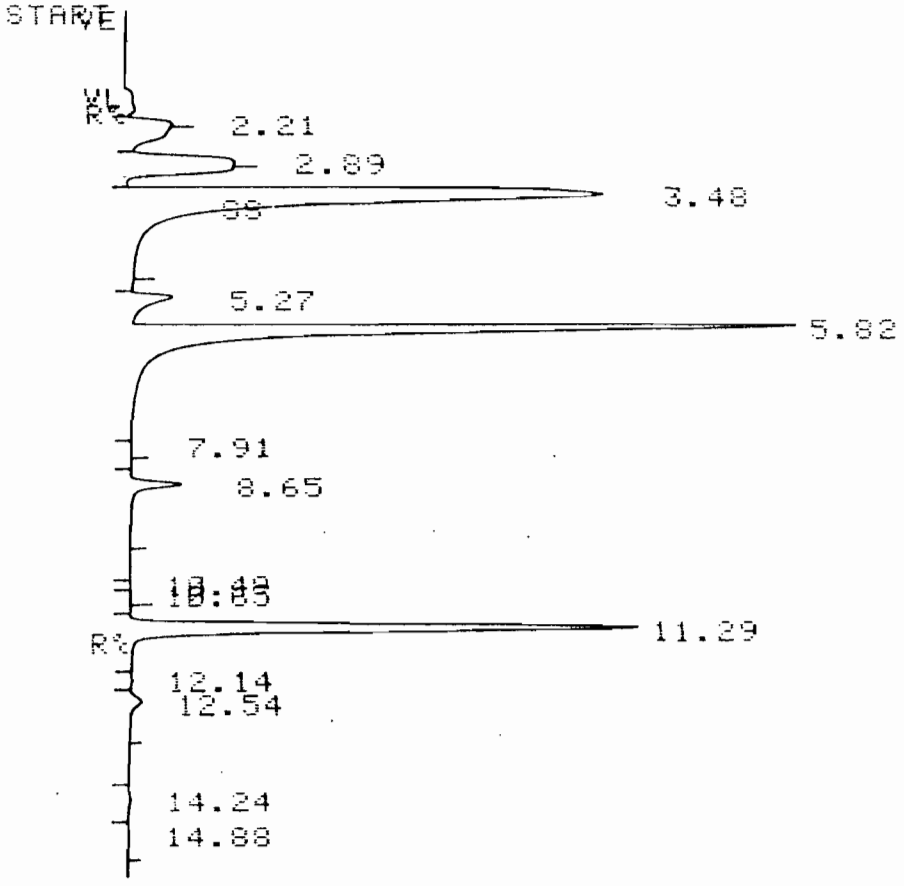
DIL FACTOR: 1.0000 E+ 0



HP RUN # 32 JUL/03/85 TIME 07:48:18
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	10030	2	7.348
3.49	3.45	235800	3	0.337
5.82	5.80	239600	4	0.303
11.30	11.33	129900	(R) 1	0.179

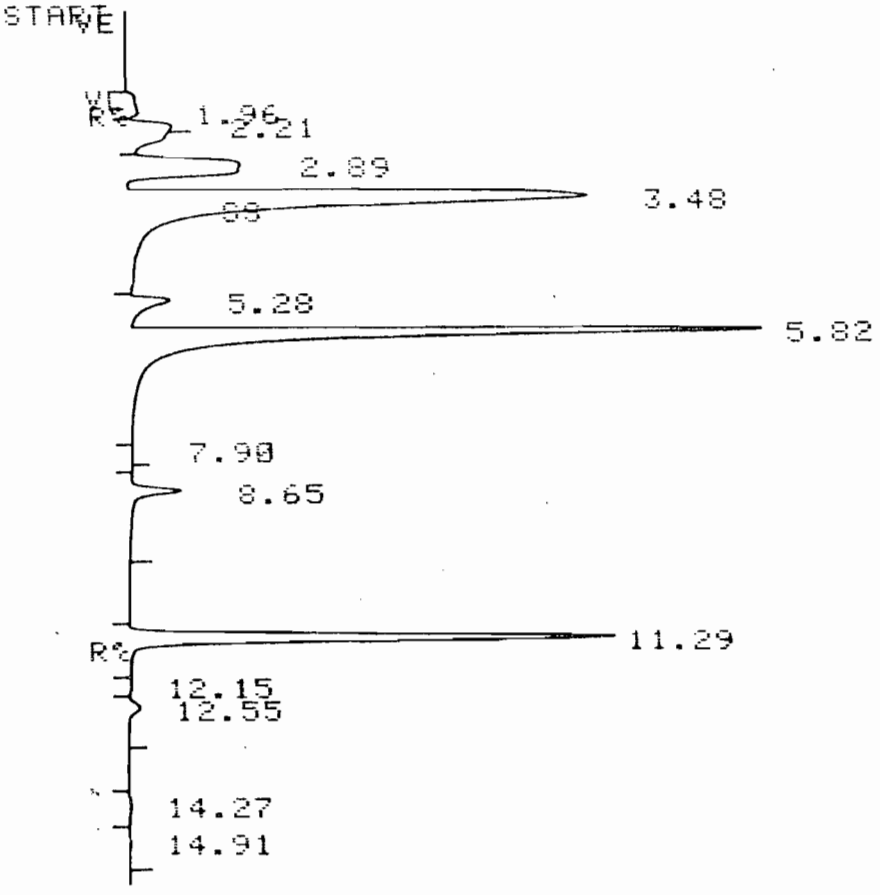
DIL FACTOR: 1.0000 E+ 0



HP RUN # 33 JUL/03/85 TIME 08:18:28
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.92	9912	2	7.262
3.48	3.44	259600	3	0.371
5.82	5.79	214500	4	0.271
11.29	11.33	133800	(R) 1	0.184

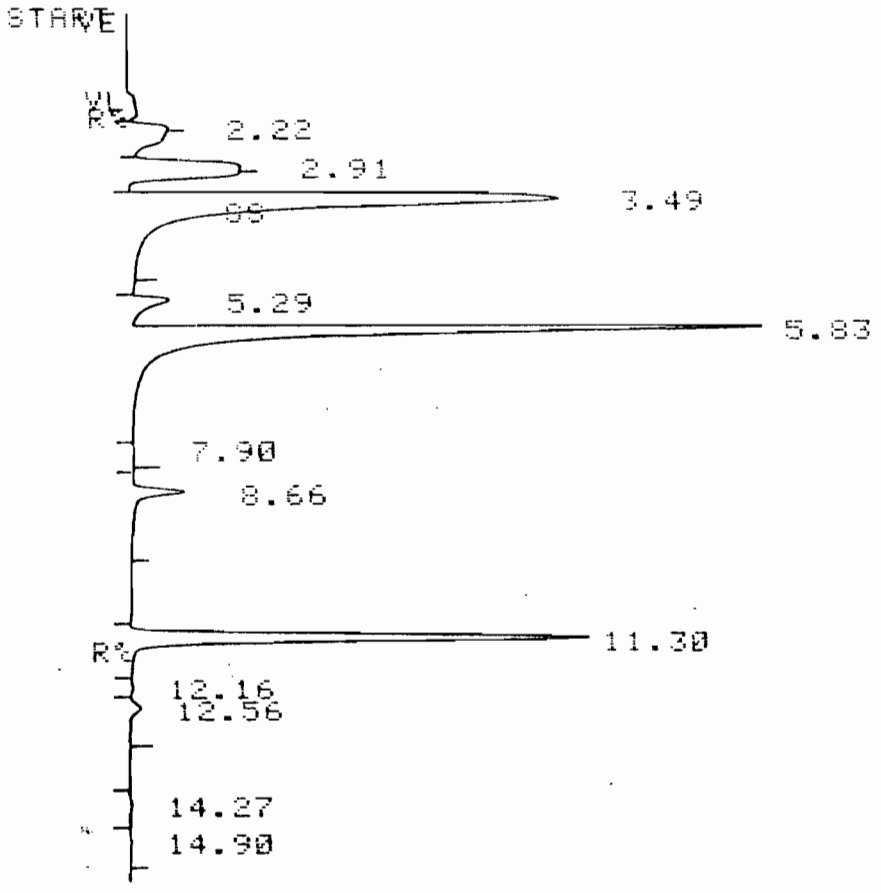
DIL FACTOR: 1.0000 E+ 0



HP RUN # 34 JUL/03/85 TIME 08:48:12
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.92	63100	2	46.228
3.48	3.44	259700	3	0.371
5.82	5.79	209700	4	0.265
11.29	11.33	128400	(R) 1	0.177

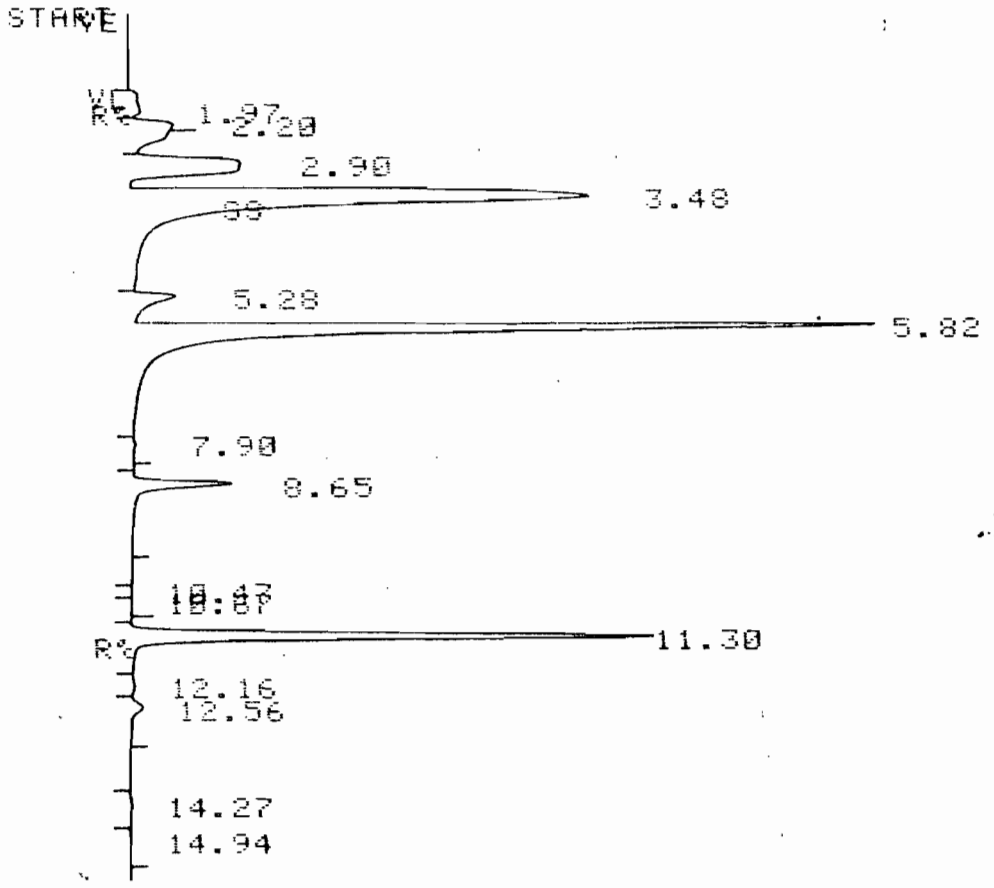
DIL FACTOR: 1.0000 E+ 0



HP RUN # 35 JUL/03/85 TIME 09:17:56
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.91	2.93	10850	2	7.949
3.49	3.45	231300	3	0.330
5.83	5.80	203800	4	0.258
11.30	11.33	121500	(R) 1	0.167

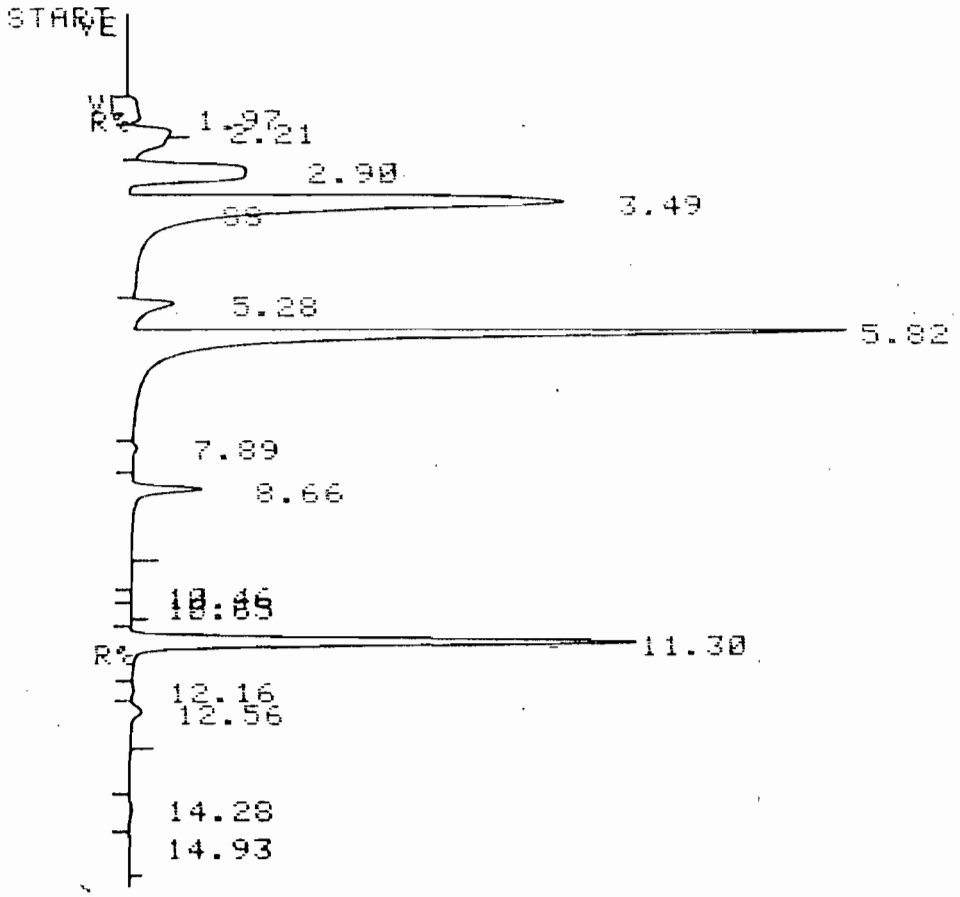
DIL FACTOR: 1.0000 E+ 0



HP RUN # 36 JUL/03/85 TIME 09:47:34
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	63280	2	46.360
3.48	3.45	262200	3	0.375
5.82	5.80	240000	4	0.304
11.30	11.33	137200	(R) 1	0.189

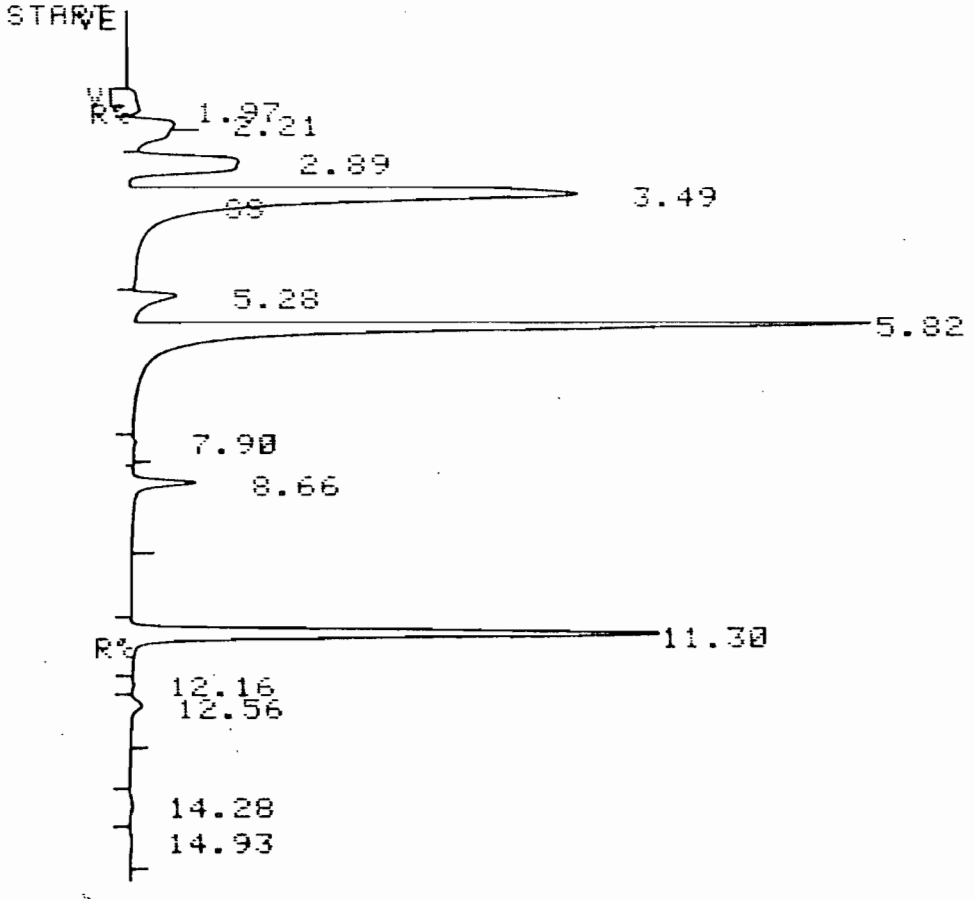
DIL FACTOR: 1.0000 E+ 0



HP RUN # 37 JUL/03/85 TIME 10:17:41
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	66260	2	48.543
3.49	3.45	225500	3	0.322
5.82	5.80	230500	4	0.292
11.30	11.33	134200	(R) 1	0.185

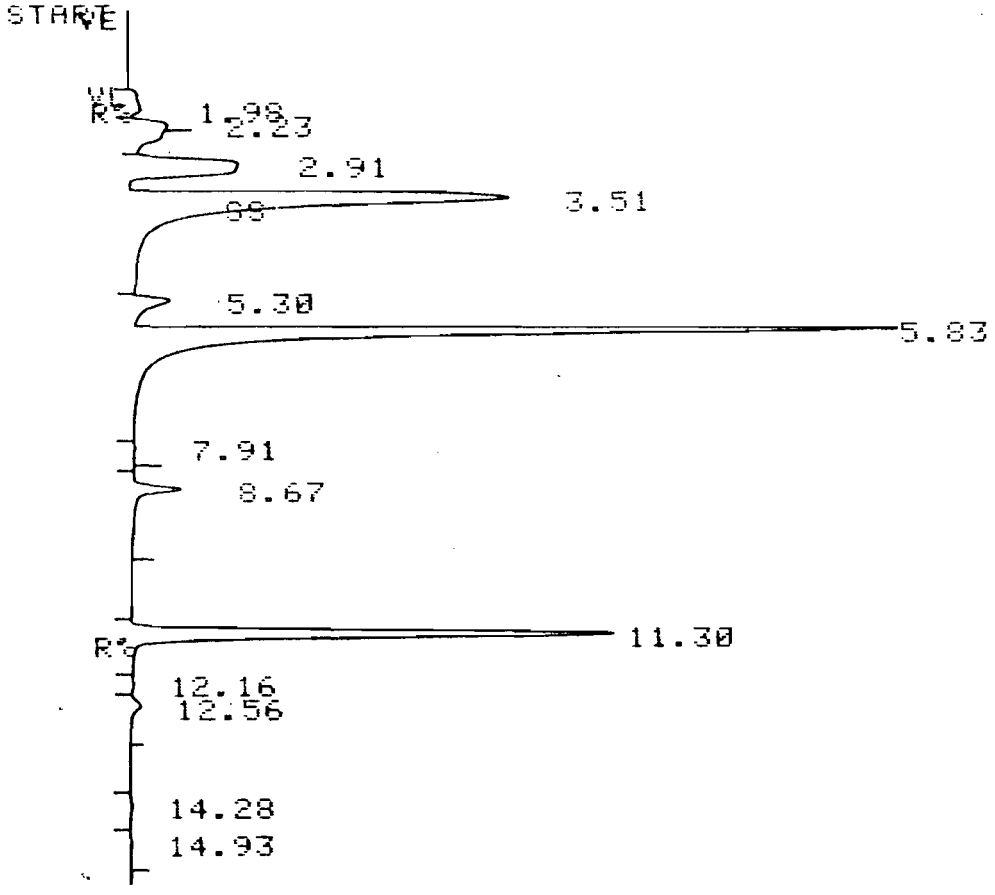
DIL FACTOR: 1.0000 E+ 0



HP RUN # 38 JUL/03/85 TIME 10:48:56
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.93	61100	2	44.763
3.49	3.45	252500	3	0.361
5.82	5.80	237200	4	0.300
11.30	11.33	140000	(R) 1	0.193

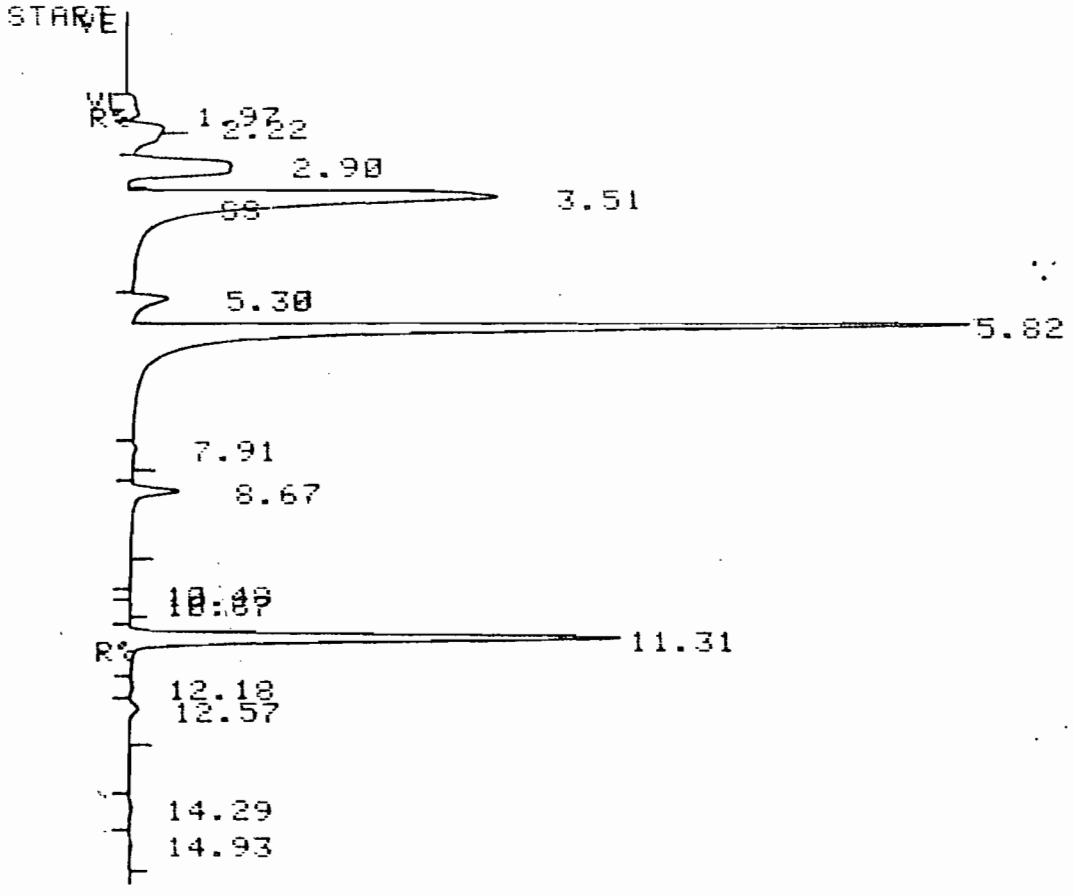
DIL FACTOR: 1.0000 E+ 0



HP RUN # 39 JUL/03/85 TIME 11:18:58
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.91	2.93	57160	2	41.876
3.51	3.45	206800	3	0.295
5.83	5.80	242000	4	0.306
11.30	11.33	127600	(R) 1	0.176

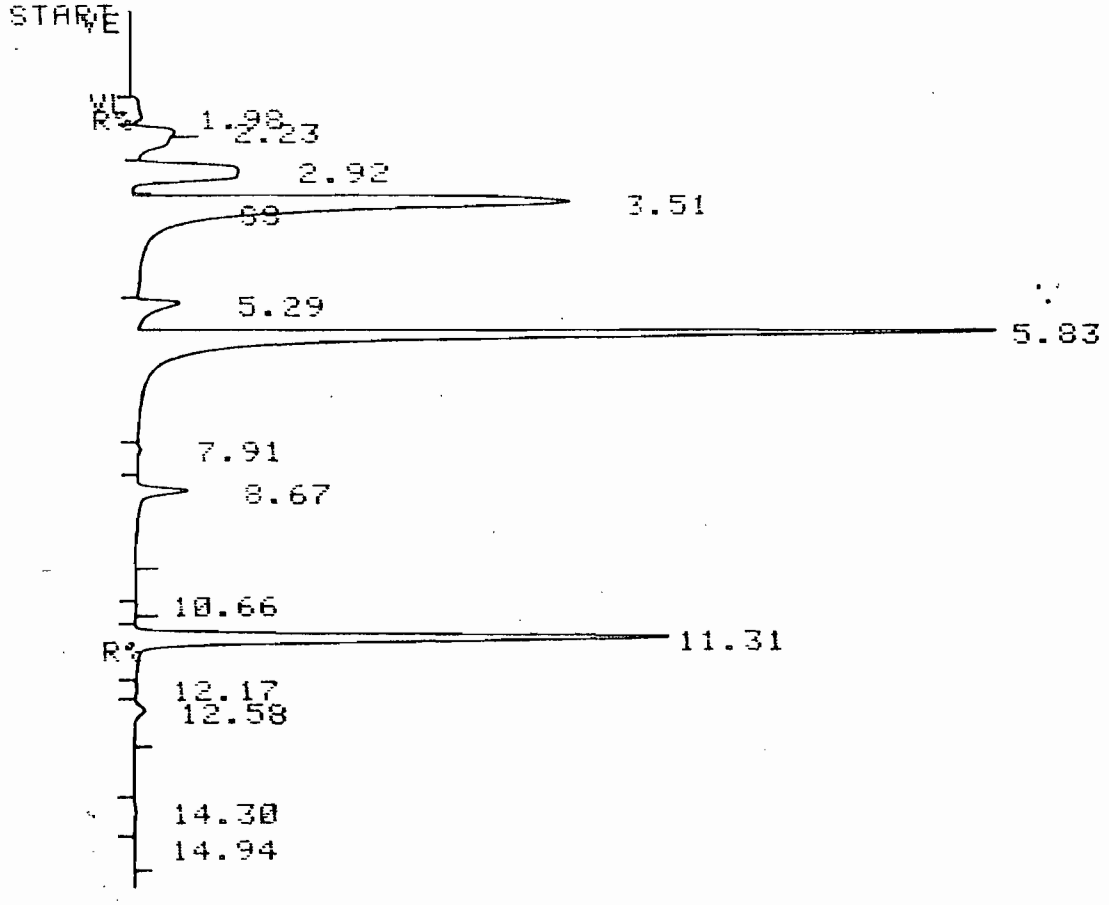
DIL FACTOR: 1.0000 E+ 0



HP RUN # 40 JUL/03/85 TIME 11:48:20
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	57770	2	42.323
3.51	3.45	207200	3	0.296
5.82	5.80	262900	4	0.333
11.31	11.33	129600	(R) 1	0.178

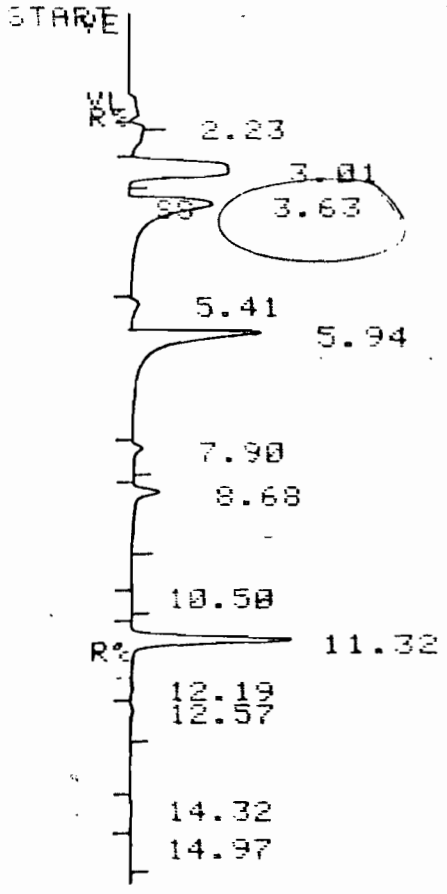
DIL FACTOR: 1.0000 E+ 0



HP RUN # 41 JUL/03/85 TIME 12:18:19
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.92	2.93	58050	2	42.528
3.51	3.45	240700	3	0.344
5.83	5.80	274500	4	0.347
11.31	11.33	142100	(R) 1	0.196

DIL FACTOR: 1.0000 E+ 0

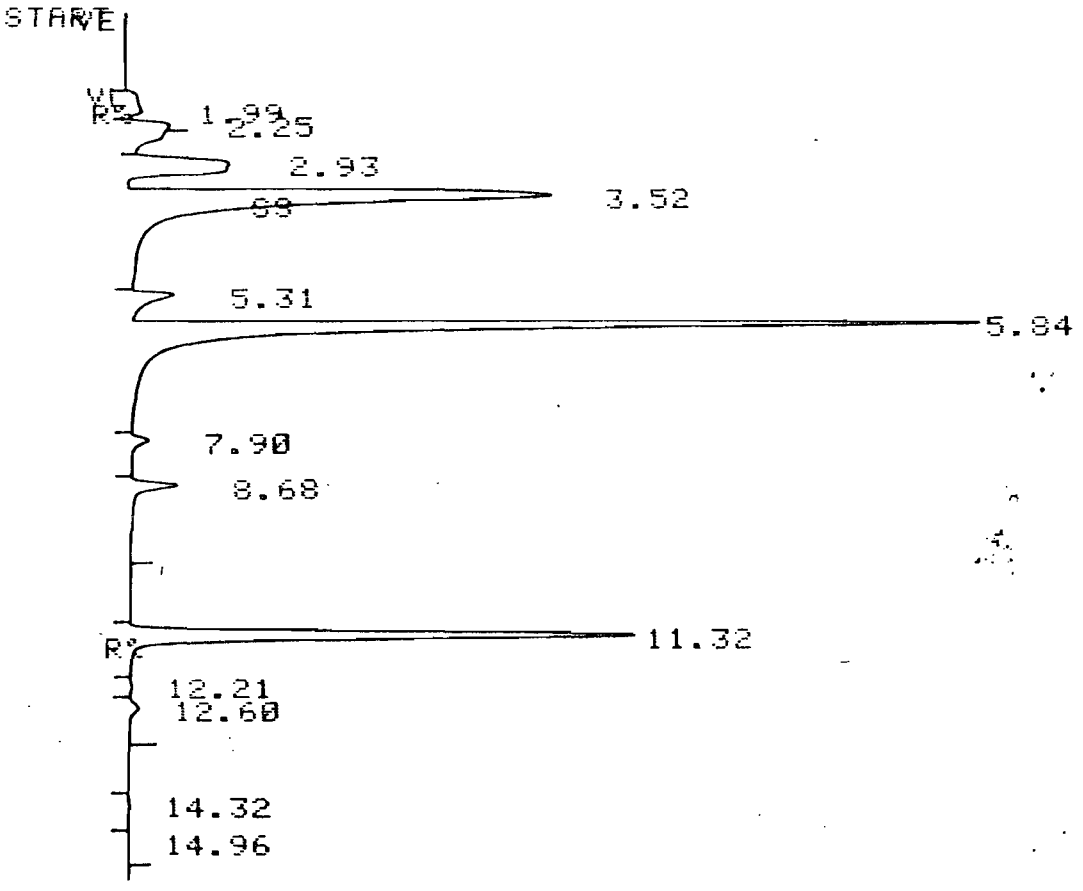


BLOWERS ON ONLY
PRESS SPEED · 0

HP RUN # 42 JUL/03/85 TIME 12:51:41
ESTD

	RT	EXP RT	AREA	CAL #	AMT
			57570		
	5.94	5.81	57720	4	0.073
	11.32	11.33	46340	(R) 1	0.064
			54100	2	

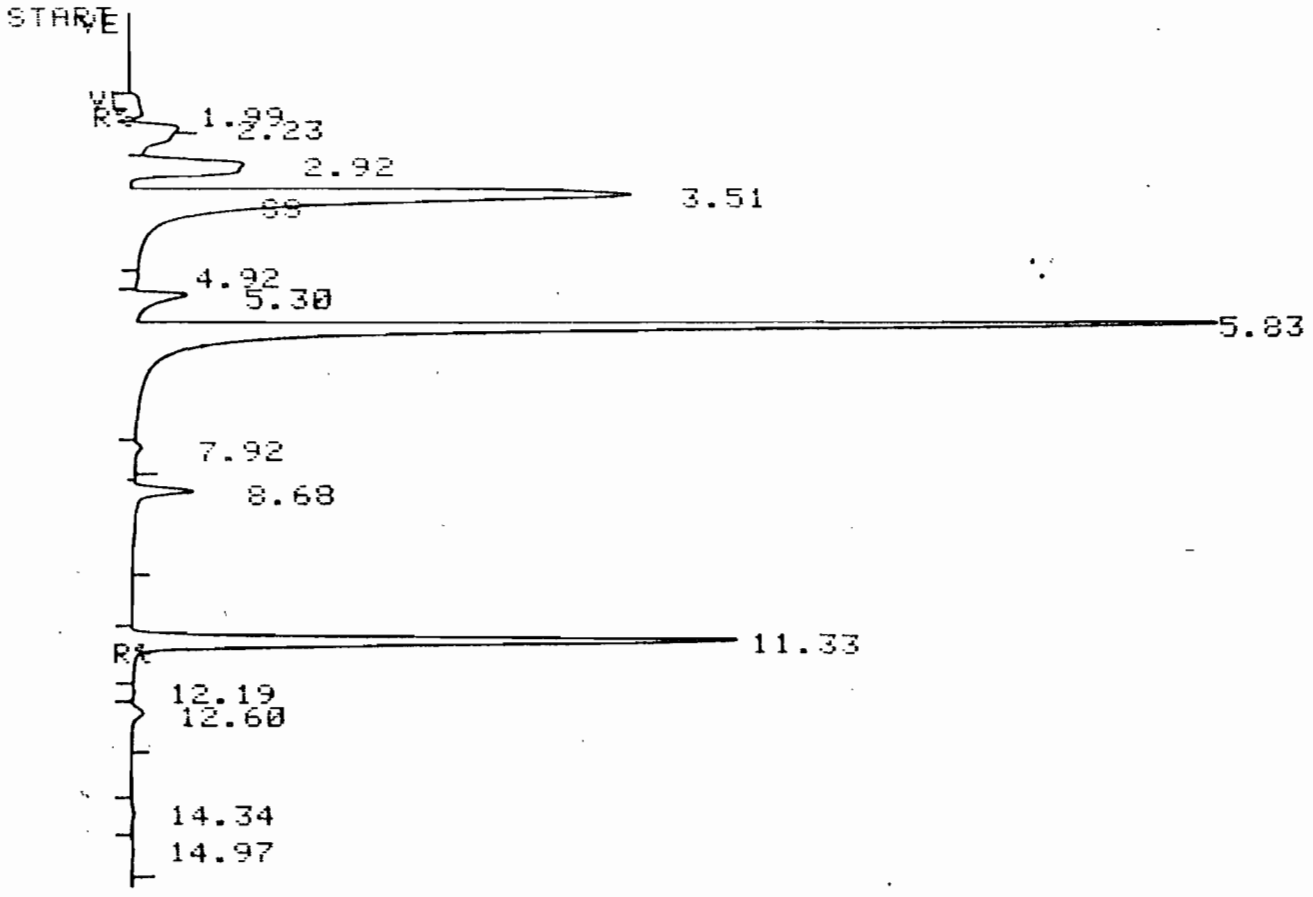
DIL FACTOR: 1.0000 E+ 0



HP RUN # 43 JUL/03/85 TIME 13:19:24
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.93	2.93	52720	2	38.623
3.52	3.45	228100	3	0.326
5.84	5.81	267300	4	0.338
11.32	11.33	135600	(R) 1	0.187

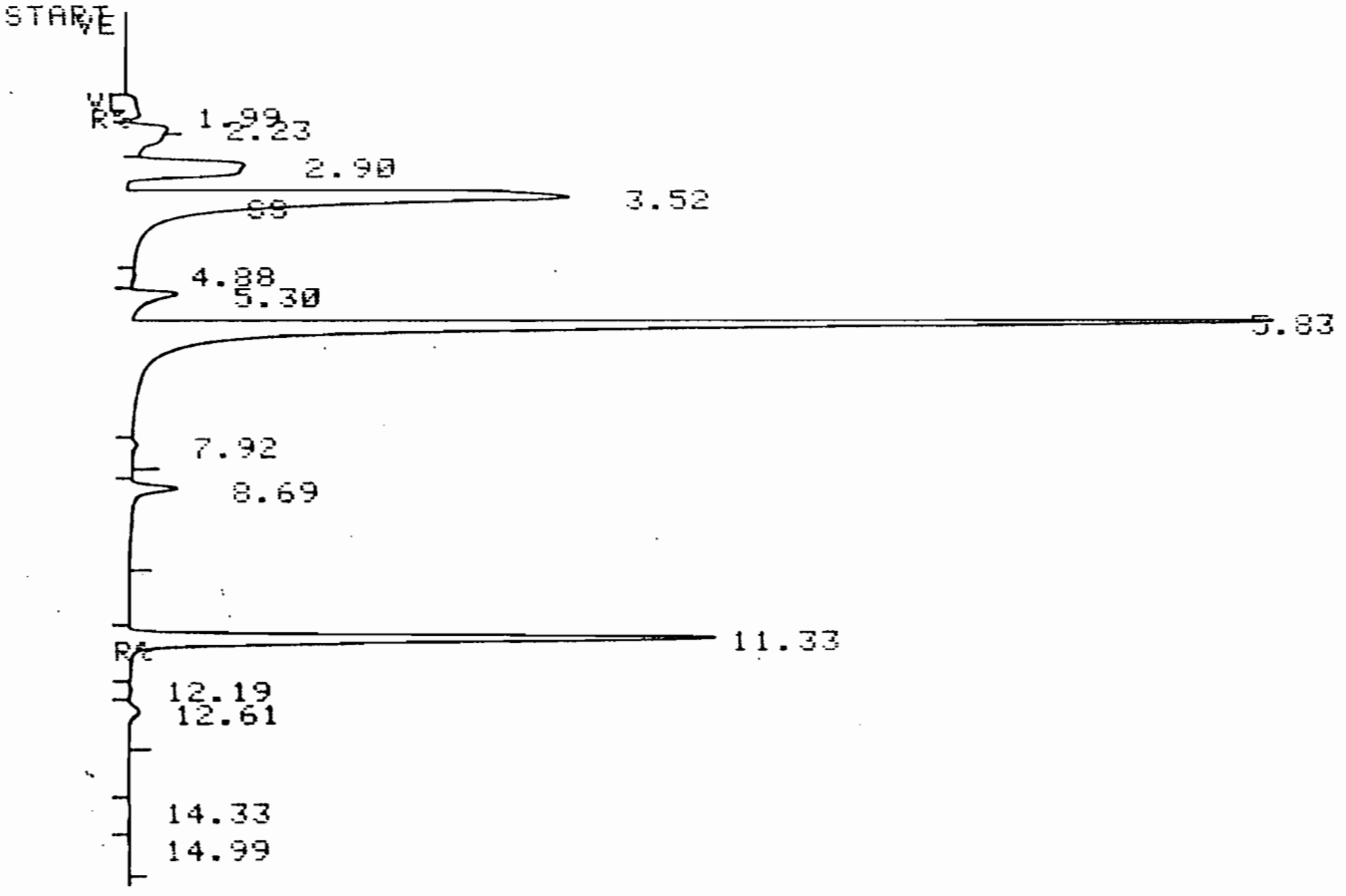
DIL FACTOR: 1.0000 E+ 0



HP RUN # 44 JUL/03/85 TIME 13:49:11
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.92	2.94	58390	2	42.777
3.51	3.46	266700	3	0.381
5.83	5.82	323900	4	0.410
11.33	11.33	162300	(R) 1	0.223

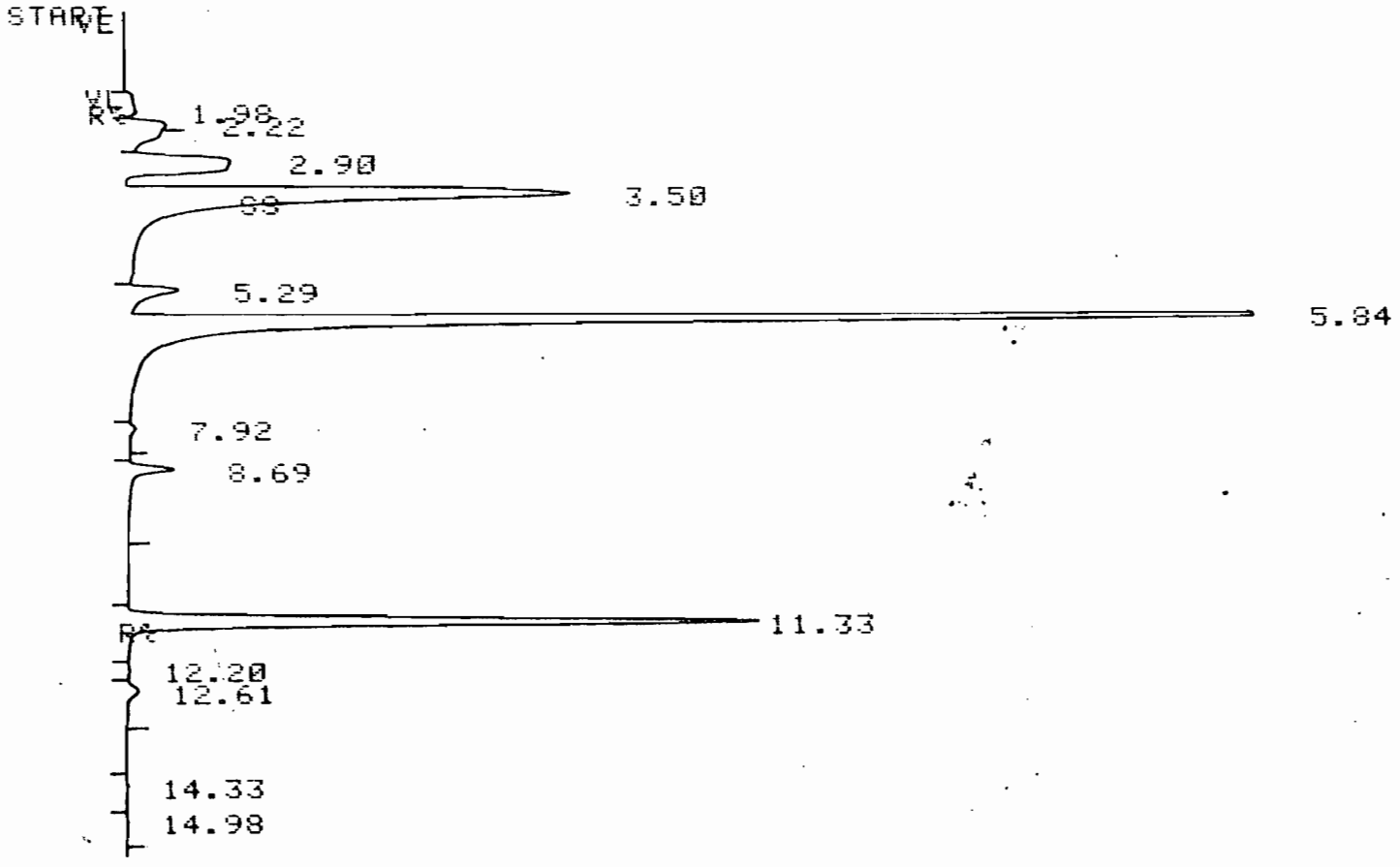
DIL FACTOR: 1.0000 E+ 0



HP RUN # 45 JUL/03/85 TIME 14:19:22
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.94	62450	2	45.752
3.52	3.46	242900	3	0.347
5.83	5.82	341600	4	0.432
11.33	11.33	159200	(R) 1	0.219

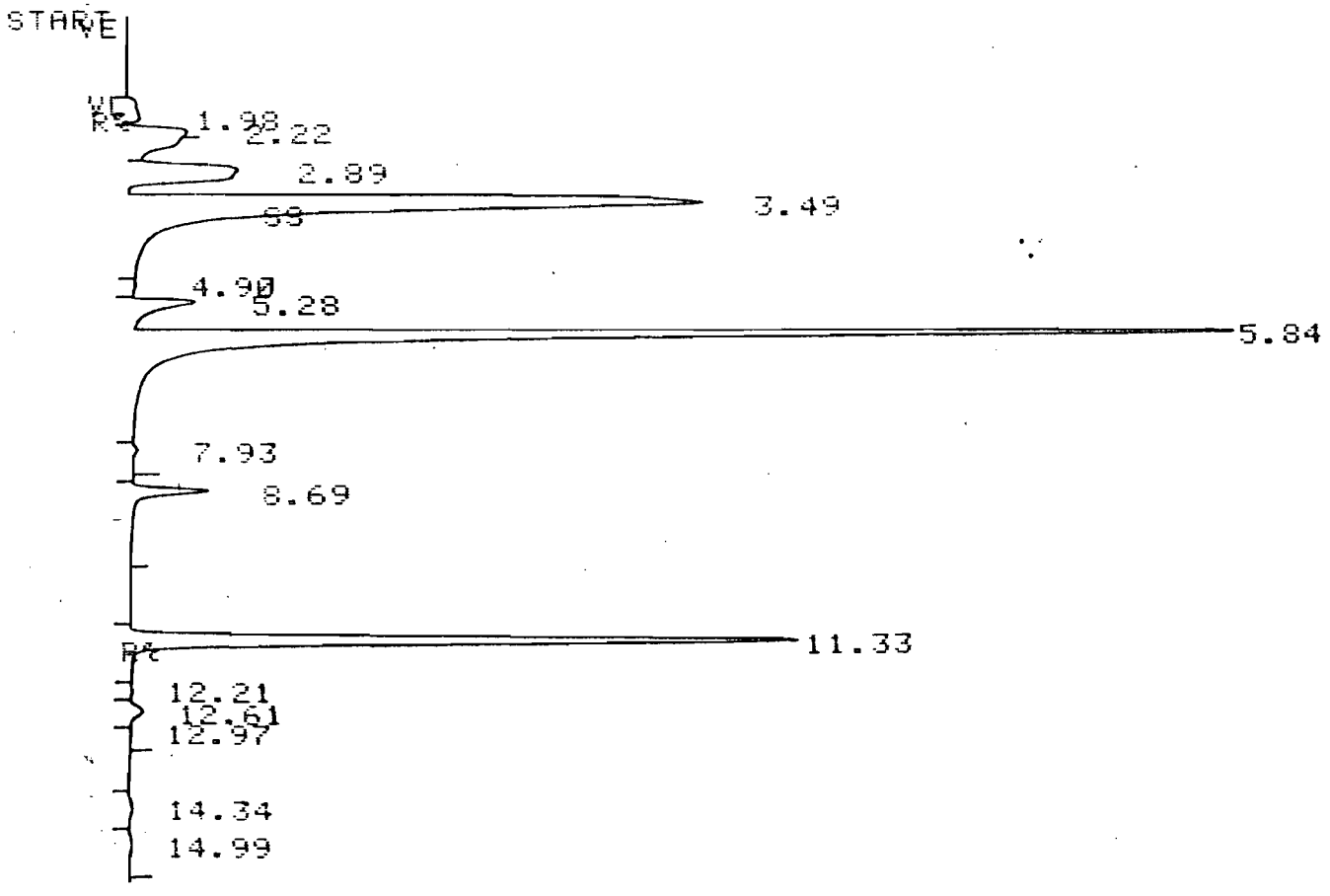
DIL FACTOR: 1.0000 E+ 0



HP RUN # 46 JUL/03/85 TIME 14:50:58
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.94	60240	2	44.132
3.50	3.46	262400	3	0.375
5.84	5.82	409900	4	0.519
11.33	11.33	175400	(R) 1	0.241

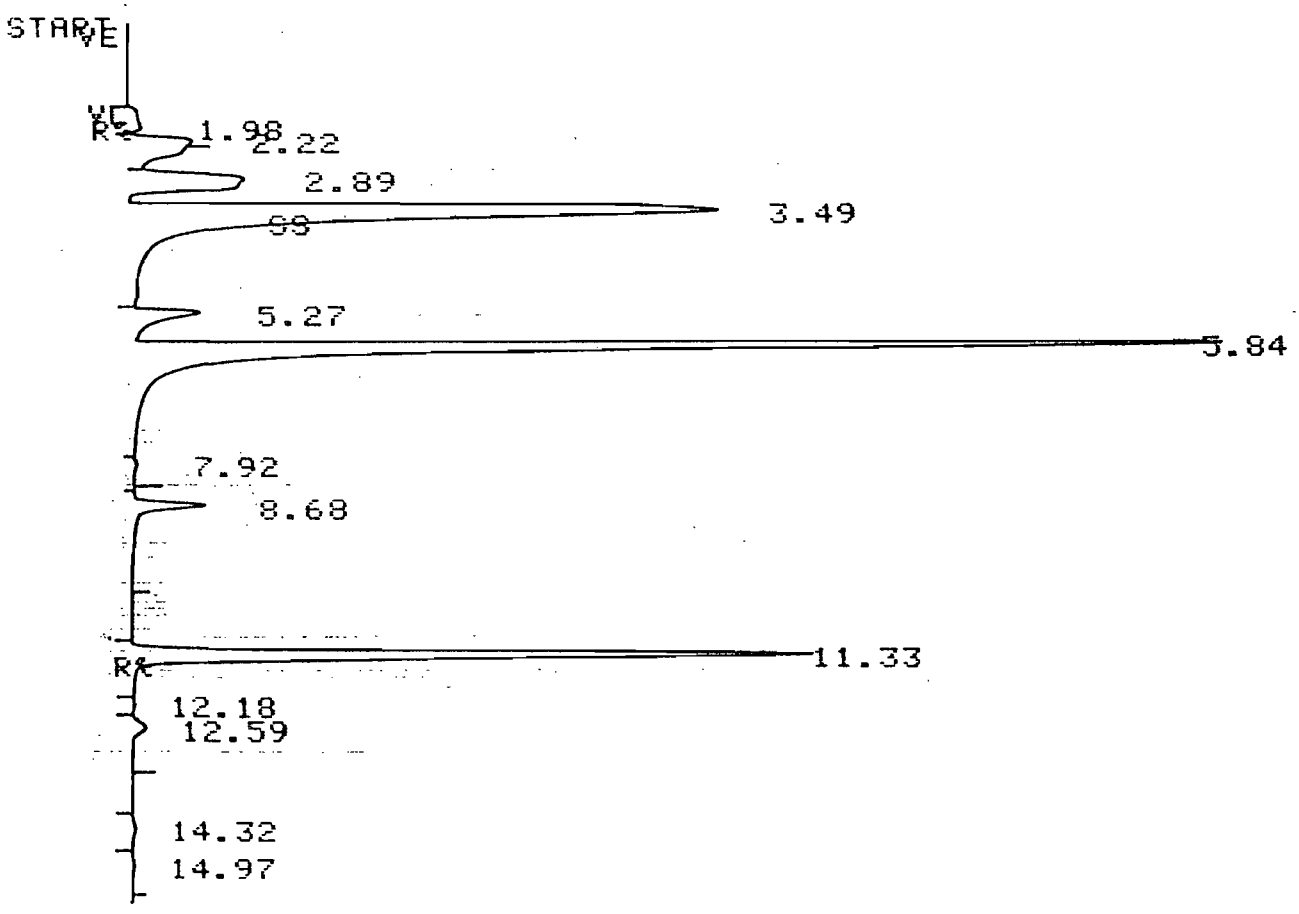
DIL FACTOR: 1.0000 E+ 0



HP RUN # 47 JUL/03/85 TIME 15:22:03
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.94	59310	2	43.451
3.49	3.46	324600	3	0.464
5.84	5.82	339500	4	0.430
11.33	11.33	182200	(R) 1	0.251

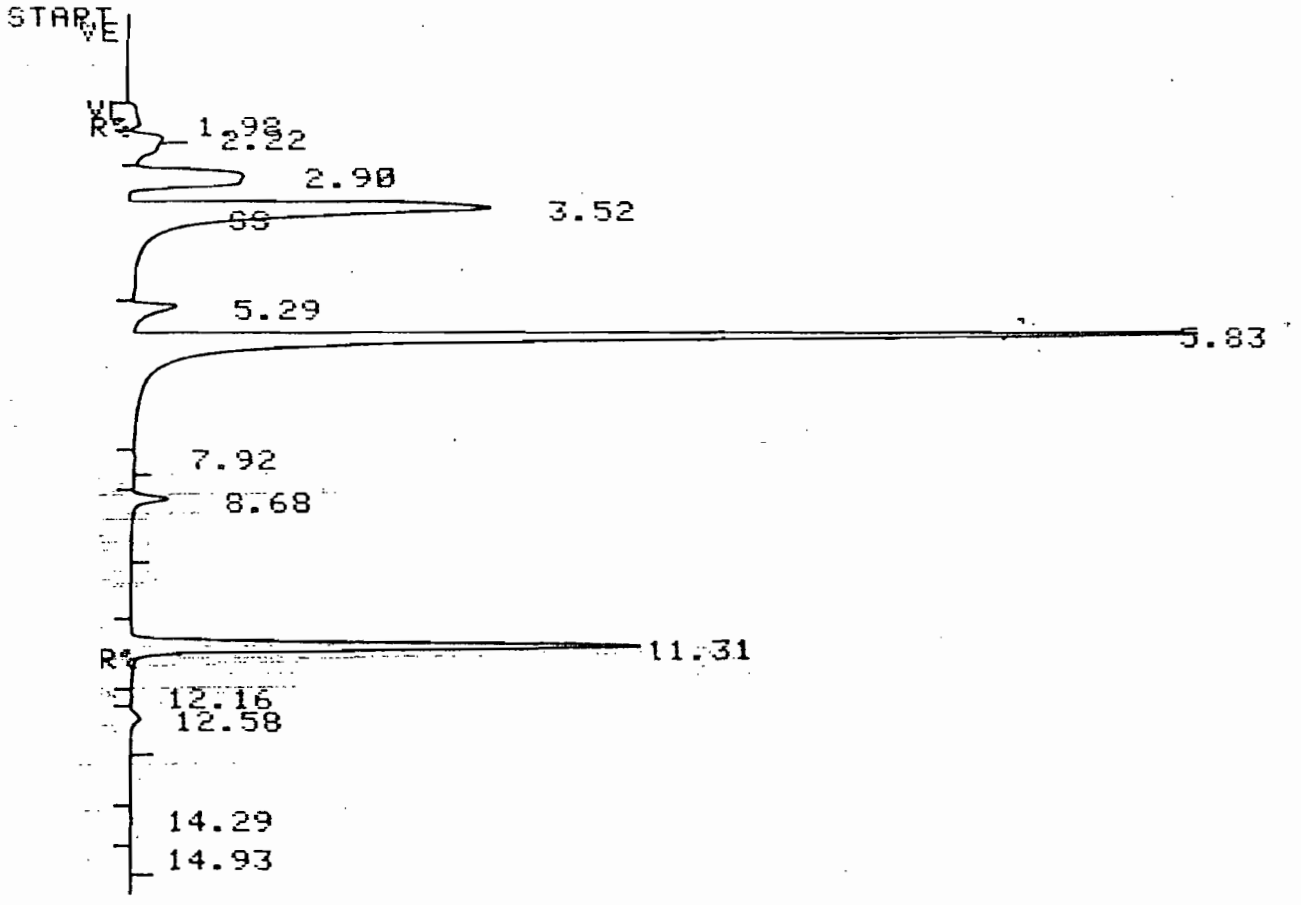
DIL FACTOR: 1.0000 E+ 0



HP RUN # 48 JUL/03/85 TIME 15:52:05
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.89	2.94	60040	2	43.986
3.49	3.46	326900	3	0.467
5.84	5.82	329100	4	0.416
11.33	11.33	183600	(R) 1	0.253

DIL FACTOR: 1.0000 E+ 0



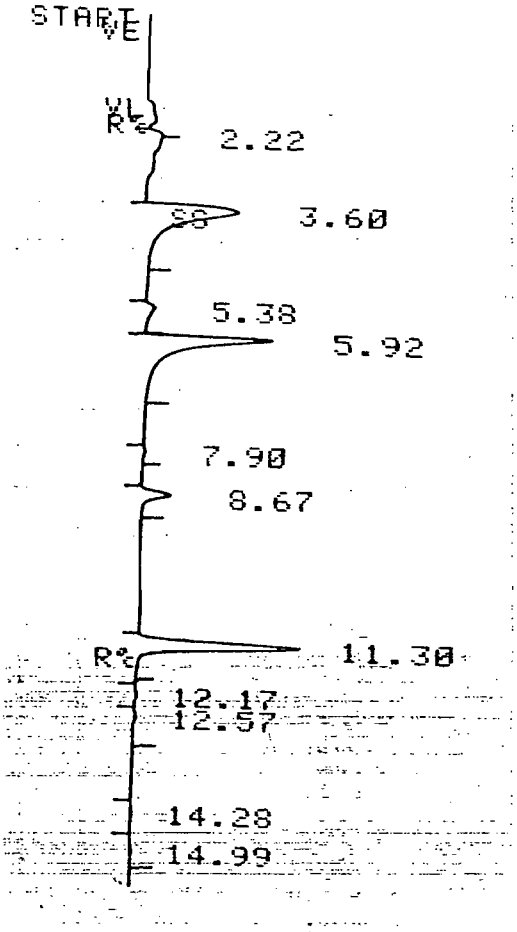
HP RUN # 49 JUL/03/85 TIME 16:31:40
ESTD

RT	EXP RT	AREA	CAL #	AMT
2.90	2.93	62950	2	46.118
3.52	3.45	204700	3	0.292
5.83	5.80	322100	4	0.407
11.31	11.33	137600	(R) 1	0.189

DIL FACTOR: 1.0000 E+ 0

Benzene

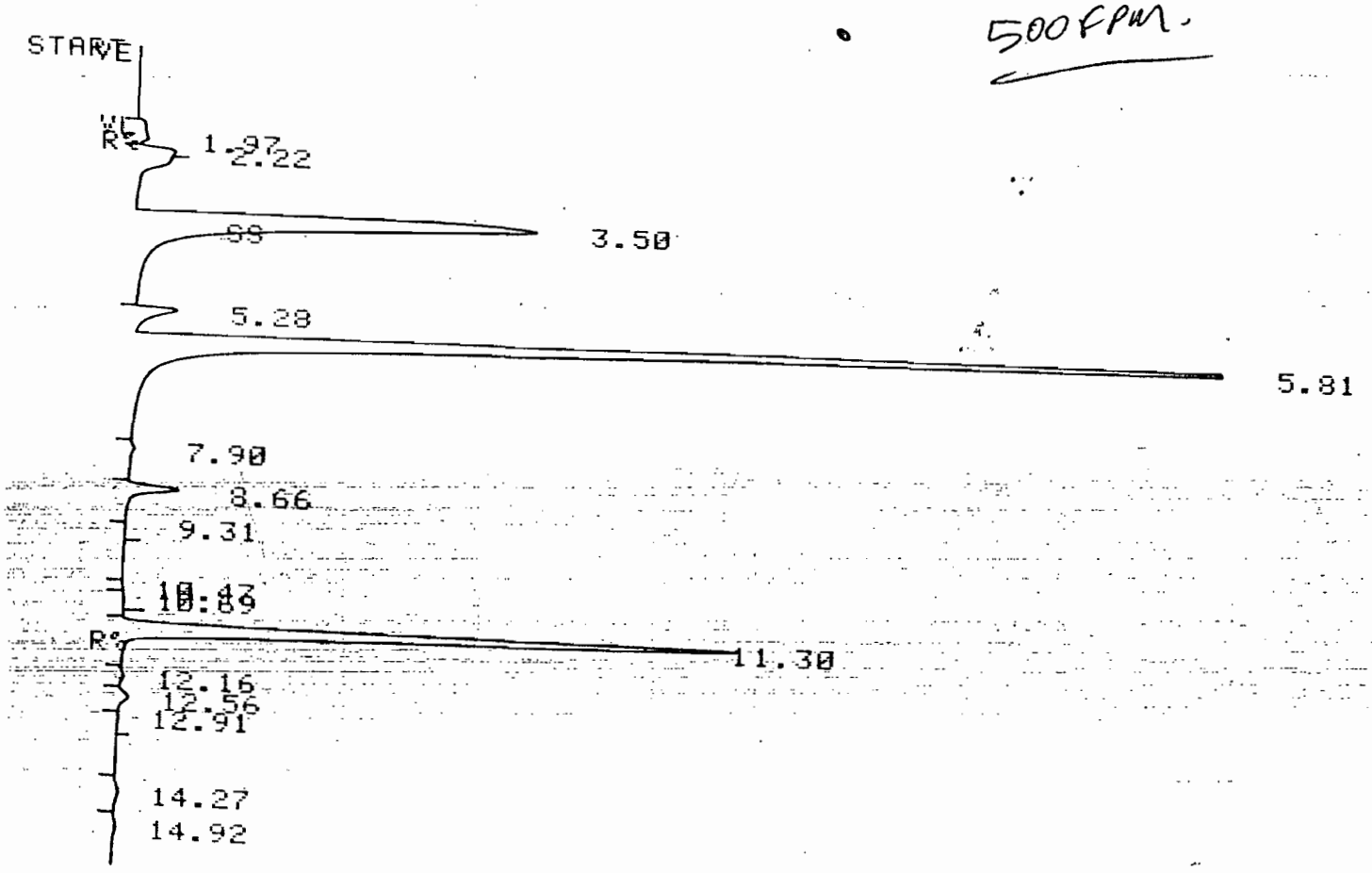
no speed.



HP RUN # 50 JUL/03/85 TIME 19:55:38
ESTD

RT	EXP RT	AREA	CAL #	AMT
5.92	5.80	52250	4	0.066
11.30	11.33	46010	(R) 1	0.063

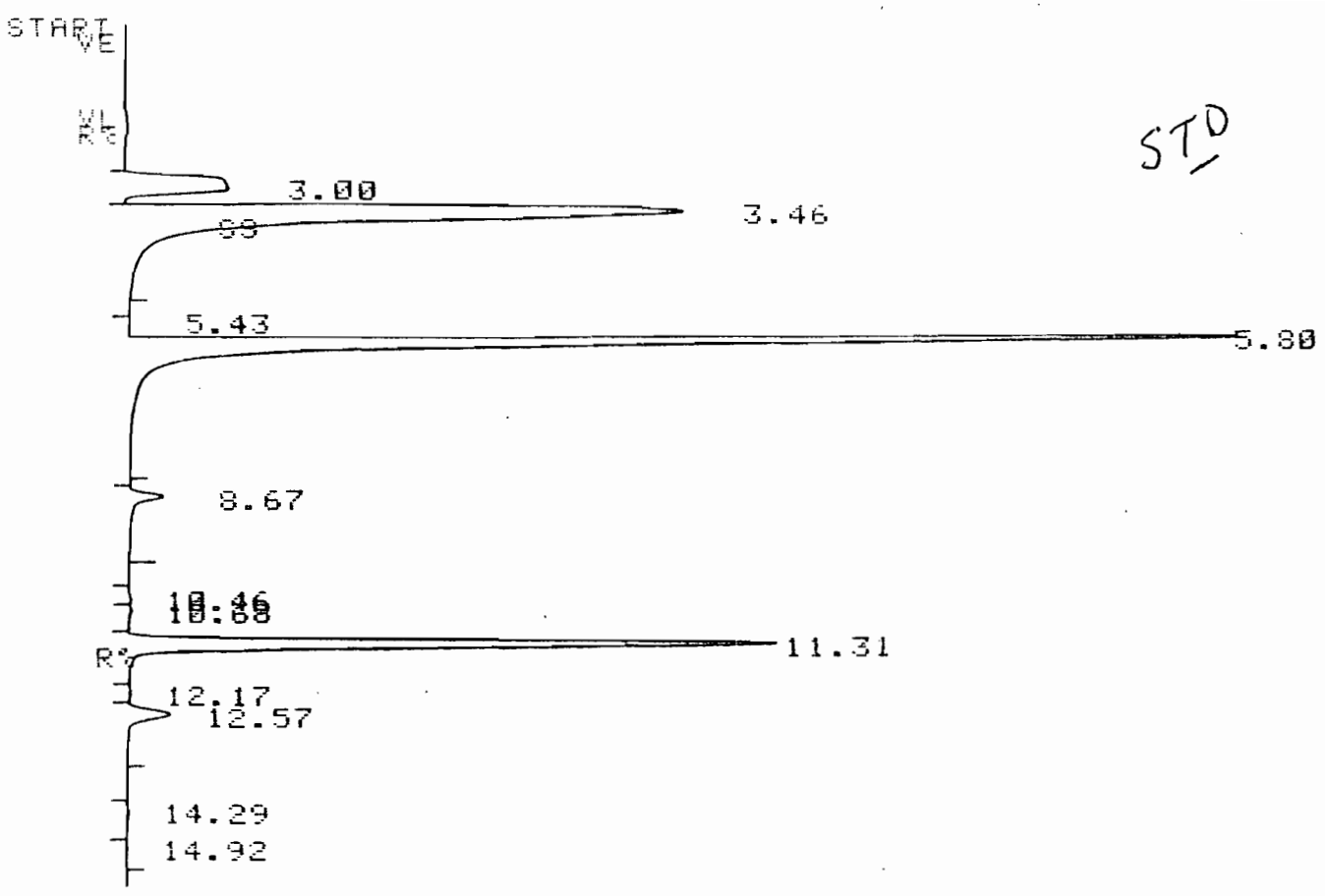
OIL FACTOR: 1.0000 E+ 0



:P RUN # 51 JUL/03/85 TIME 20:43:50
:STD

RT	EXP RT	AREA	CAL #	AMT
3.50	3.45	234600	3	0.335
5.81	5.80	391700	4	0.496
11.30	11.33	177200	(R) 1	0.244

IL FACTOR: 1.0000 E+ 0



HP RUN # 60 JUL/09/85 TIME 10:54:33
ESTD

RT	EXP RT	AREA	CAL #	AMT
3.00	3.05	62830	2	46.030
3.46	3.45	319200	3	0.456
5.80	5.80	341400	4	0.432
11.31	11.33	177200	(R) 1	0.244

DIL FACTOR: 1.0000 E+ 0

11.31

5.81

TIME 11:19:27

#	AMT
2	45.313
	0.457
	0.426
	0.243